

## CHAPTER 3: AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

### AESTHETICS/LIGHT AND GLARE

This section describes the existing aesthetic condition of Jefferson Park, the nature of the surrounding properties, and existing sources of light and glare. Potential impacts resulting from the proposed addition of lighted playfields, basketball and tennis courts, walkways, as well as security lighting and the addition of new structures such as the new Community Center Activities Building and Gymnasium under each of the alternatives is evaluated. Information was collected from existing documentation and site visits.

#### Affected Environment

##### Aesthetics

Jefferson Park is located in a largely residentially-zoned area of the Beacon Hill community and immediately adjacent to major four-lane arterials on the east, north, and west. ~~at the immediately adjacent areas are non-residential.~~ The project area is bordered on the east by the 18-hole Jefferson Park Golf Course, on the south by Veterans Affairs Medical Center and Asa Mercer Middle School, and to the north and west by single- and multi-family residential. ~~However, these immediate residential areas are separated by major four-lane arterials~~ Residential areas also exist east of the Golf Course and south of the Veterans Affairs Medical Center. Beacon Avenue South runs north-south between the east edge of the project area and the 18-hole golf course. The west side of the project area is separated from residential development by 15th Avenue South and 16th Avenue South. The north border of the project area is separated from single- and multi-family residential by South Spokane Street (Figure 2-1). Beacon Avenue South, 15th Avenue South, and South Spokane Street are major arterials that convey large numbers of vehicles throughout the day. For example, Beacon Avenue South experiences peak weekday traffic between 4:00 and 6:00 p.m. and conveys approximately 1,200 to 1,300 vehicles per hour (Heffron Transportation, Inc., 2002).

Most of the Park is open with trees located near the site edges, along Beacon Avenue South, and within the golf course areas, contributing to the park setting. There is an approximate 60-foot elevation change beginning at the northwest corner of the project area at South Spokane Street and 15th Avenue South, and rising abruptly to the east and south. This elevation change provides panoramic views west to Harbor Island, West Seattle, and the Olympic Mountains, and north to Elliott Bay and the downtown Seattle skyline. There is also an approximate 50-foot elevation change beginning at 15th Avenue on the west (mid-way between South Spokane Street and South Dakota Street), rising to the east to Beacon Avenue South. From Jefferson Community Center there is an approximate 20-foot elevation change as the topography slopes downward to Fire Station 13. Views from the south portion of the site (e.g., the lawn bowling facility) include the North and South Reservoirs in the foreground. This area is industrial in feel due to the perimeter chain-link fencing and the empty, decommissioned South Reservoir (Figure 3-1).

Areas within and adjacent to the project area boundaries contain several use areas and associated structures. These include the North and South Reservoirs, Jefferson Field, Jefferson Community Center, tennis courts, children's play area, lawn bowling facility, golf maintenance facility, golf driving range, and Fire Station 13.

**Areas Within Project Boundaries.** The Jefferson Community Center is approximately 7,273 square feet and is two stories plus a basement. The building is mainly brick with a composite roof. The building is compatible in bulk and scale with nearby single- and multi-family residences. The Community Center and adjacent facilities (basketball court, tennis courts, parking, children's play area, etc.) cover approximately 2.56 acres (Seattle Parks and Recreation, Design Program, 2001).

The children's play area is located to the north of the Community Center and is approximately 0.25 acre. It contains four defined play equipment areas: a four-seat swing set, a climber, an area with spring toys, and a whirl. The play equipment is in generally good condition. The play area also contains a few benches and a picnic table. This area is surrounded by grass and is separated from traffic on adjacent Beacon Avenue South by a 3-foot chain-link fence. No other landscaping is present in the play area. There are two standard-sized tennis courts adjacent to the Community Center to the north, and one half-size basketball court adjacent to the Community Center to the west.

Jefferson Field is located north of Asa Mercer Middle School just east of 16th Avenue South. It is approximately 5.64 acres. This field is a multi-use field containing a Samoan cricket pitch, two softball backstops, a deteriorated high jump pit, and a deteriorated long jump pit. The field is primarily used for Samoan cricket, youth soccer, and ultimate frisbee (Seattle Parks and Recreation, 2001).

The northwest corner of the project area (South Spokane Street along the north edge, and 15th Avenue South to South Dakota Street on the west edge) contains an undeveloped, grassy slope. A group of Seattle Public Utilities (SPU) buildings are located at the north end of the grassy area and support operations and maintenance functions of the reservoirs. A gravel service road for SPU maintenance vehicles is located approximately half way up the slope. A single-family residence and a Metro bus shelter are located at the south end of this grassy area. No park facilities or amenities are located in this area at present.

The reservoirs are the most dominant features on the project site. Both reservoirs are constructed with earthen dam sides and perimeter chain-link fencing, and occupy the middle three-quarters of the Park from its northern edge to its center (The Portico Group, 2001a). The North Reservoir water surface is approximately 7.4 acres; the South Reservoir water surface is approximately 5.8 acres. The total fenced reservoir area is approximately 25 acres (Seattle Parks and Recreation, 2001). Both reservoirs are contained within chain-link fencing; the North Reservoir fencing is approximately 12 feet high, the South Reservoir fencing is approximately 7 feet high. The North Reservoir also has an inner fence at the water's edge of approximately 5-foot chain-link fencing attached to taller poles supporting bird wire that protects the reservoir. Originally installed in 1959 for security purposes, the fencing of the reservoirs has had a detrimental effect on the Park's aesthetics. The fencing has divided the project area's expanse not only spatially, but also experientially. For purposes of this EIS analysis, it is assumed that the South Reservoir has



	 NORTH No Scale	File name: 22010photo.ai Original graphic by: ACT Edits by: Date: 5/1/02
		Source: Adolfson Associates, Inc.
<b>FIGURE 3-1.</b> VIEW LOOKING NORTH JEFFERSON PARK SITE PLAN EIS SEATTLE, WASHINGTON		

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a floating cover as its existing condition. This covering would be tan in color and could produce some glare on sunny days, but the tan color is generally not expected to produce a substantial source of glare for viewers. Structures associated with the reservoirs include two trailers of approximately 588 square feet each and a treatment building of approximately 300 square feet. These structures are mostly non-descript, with an institutional presence. The Water Quality Testing Laboratory is the largest of the structures associated with the reservoirs. It is a two-story, approximately 6,500 square-foot, flat-roofed, brick building sited on a slope. All structures associated with the reservoirs are located west of the North Reservoir. There is an air quality monitoring station located within the reservoir fencing, operated and maintained by Puget Sound Clean Air Agency.

The lawn bowling facility covers approximately 1.74 acres, and consists of two bowling greens, a parking area, and a clubhouse (Seattle Department of Parks and Recreation, 2001). The clubhouse is a single-story, wood sided building. The main meeting room of the clubhouse contains picture windows along its north side that take advantage of the views of downtown Seattle and Elliott Bay. A porch along the south side of the building looks out onto the bowling greens.

The intersection of 15th Avenue South and South Dakota Street is currently controlled by stop signs for vehicles on South Dakota Street only. No traffic signal or crosswalk is present for control of traffic on 15th Avenue South. 15th Avenue South is two lanes in each direction with a narrow median between.

**Areas Adjacent to Project Boundaries.** Fire Station 13 is located at the corner of Beacon Avenue South and South Spokane Street. It is an attractive 1927 single-story structure that houses one engine (Engine 13) and a battalion vehicle. The fire station facilities encompass approximately 0.44 acre (Seattle Department of Parks and Recreation, 2001).

The golf maintenance facility covers approximately 2.53 acres. The facility consists of a collection of miscellaneous structures including a four bay maintenance building, an open-air storage and maintenance area, and a paved yard (The Portico Group, 2001a; Seattle Department of Parks and Recreation, 2001). The look of this area is industrial due to the presence of vehicles and equipment and the utilitarian design of the maintenance building and other structures.

The approximately 18-acre 9-hole golf course is located in the southeast portion of Jefferson Park, immediately to the south of the lawn bowling facility and golf maintenance facility. The 9-hole course is mainly grass with some trees and shrubs, and is a pleasant, park-like area enclosed in chain-link fencing. The golf clubhouse is located along Beacon Avenue South, at the northeast corner of the 9-hole golf course. ~~A chipping green / practice area is located at the north edge of the 9-hole golf course (Figure 2-1).~~

Asa Mercer Middle School is located immediately south of Jefferson Field (Figure 2-1). The middle school site is approximately 9 acres and consists of a collection of classroom and administrative buildings, along with a gymnasium.

## Light and Glare

**Areas Within Project Boundaries.** The Community Center has outdoor security lighting on all sides of the building. Lighting is provided by fixtures mounted directly to the sides of the building. The main entrance at the south end of the building is located under a roof overhang and is lit during evening and night use hours. The tennis courts are currently not lit during the winter for energy conservation purposes. When spring hours become effective, the courts will be lit until 11 p.m.; the basketball court is not lit but receives some light from the driving range and the existing Community Center security lights.

The existing lawn bowling facility also has security lighting mounted on standard height light poles. Security lighting at this facility does not affect nearby residential areas due to its location within the boundaries of the Park (Figure 2-1).

Jefferson Field is located adjacent to 16th Avenue South on its west side. Street lights are mounted on every-other power pole along this street and are approximately 110 feet apart and approximately 30 feet above the ground.

Asa Mercer Middle School has standard security light fixtures located around the school grounds and standard light poles and fixtures in the parking area.

**Areas Adjacent to Project Boundaries.** The driving range along Beacon Avenue South is currently the main source of light and glare in the Park. The driving range utilizes high-wattage lamps that shine horizontally out toward the driving range lawn area. Light and glare from these lamps are visible to residents to the north of the project area and to drivers traveling along Beacon Avenue South and South Spokane Street in the vicinity of Jefferson Park. The driving range is open for business from daybreak until 10 p.m. (spring hours).

The golf maintenance facility has security lighting mounted on standard height light poles. This security lighting does not affect nearby residential areas due to its location within the boundaries of the Park and the presence of mature trees around the facility. The 9-hole golf course ~~and chipping green are~~is not lit.

The parking strip along the east edge of the Park and parallel with Beacon Avenue South is lit by typical street light standards that are approximately 50 feet tall and spaced approximately 110 feet apart.

## Impacts

### Alternative A – Interim Plan

#### Construction

**Aesthetics.** During construction, nearby residents, park users, and people in passing vehicles would see dust, mud, stockpiles of soil and debris, and/or construction equipment in the North Reservoir area, depending upon the stage of construction. Demolition equipment, heavy trucks, and other construction vehicles and equipment would be present on the site during early

construction stages. Approximately 820 truckloads (1,640 truck trips) would occur during removal of the demolition debris. However, the number of truck trips would be reduced if the concrete lining of the North Reservoir is broken up and used as fill material. Heavy trucks would continue to enter and exit the project area to deliver fill material until the former North Reservoir area is brought to the desired elevation (approximately 14,000 truckloads or 28,000 truck trips). Heavy trucks and other construction vehicles would likely enter and exit the project site via Beacon Avenue South and/or via South Dakota Street/15th Avenue South. Heavy machinery and construction vehicles would continue to be present while the site is contoured and while plantings are installed and other amenities are constructed. Demolition of the North Reservoir and construction of the Great Meadow is expected to last approximately two years.

During construction, impacts to views of the existing grassy bench (the Terrace) to the west of the North and South Reservoirs would include dust, mud, stockpiles of soil and debris, and the presence of construction vehicles and equipment. This portion of the Park would be filled and graded to create a gently sloping area that could be used for play and other passive recreational activities.

Impacts to views of Jefferson Field during construction activities would be similar to those described for the Terrace and Great Meadow, but would not involve demolition activities or the placement of large amounts of fill.

No construction-related aesthetic, light, or glare impacts are expected during construction of the new traffic signal at 15th Avenue South and South Dakota Street. Support poles, wires and signals would be installed above ground. Crosswalk marking would be added over the road surface. Some digging and excavating would be necessary for installation of signal sensors/activators within 15th Avenue South. Construction of this traffic signal would last only a few days.

The existing chain-link fencing around the perimeter of the North Reservoir would be removed for construction activities. Temporary security fencing would be installed around the construction area, but would be removed following the completion of construction activities. The temporary fencing would most likely be chain-link fencing.

Views across the project area during construction would include the same impacts as described above for off-site viewer groups. Views of downtown Seattle, Elliott Bay, and the Olympic Mountains would not be blocked or altered by construction activities; however, construction activities in the foreground could be distracting to some viewers in areas such as the lawn bowling facility.

**Light and Glare.** Demolition and construction activities are expected to occur during daylight hours, and no additional light and/or glare would occur as a result of these construction activities. However, should trucking of fill material occur during evening hours, lighting of the construction site would be required. This lighting would be visible to residences to the north and west of the project area, golfers at the driving range, users of the Community Center and lawn bowling facility, and passing vehicles. This lighting would be temporary and is not expected to create a substantial impact to viewer groups with the implementation of appropriate mitigation measures.

### Operation

**Aesthetics.** Following demolition of the North Reservoir and subsequent construction of the new Great Meadow area, the project area would change from open water surrounded by 12-foot chain-link fencing to a planted "meadow" area. The Great Meadow would consist of approximately 14 acres of non-dedicated grassy meadow area that could be used for impromptu play and gatherings such as neighborhood festivals. This area would also contain plants, shrubs, and trees, pedestrian paths, and ponds and a constructed stream that flows from the new Community Center Activities Building to the northwest end of the project area (the Overlook).

The new Community Center Gymnasium, including accessory support spaces, would be constructed adjacent to the existing Community Center and would total approximately 10,000 square feet. The new Community Center Activities Building would be approximately 14,000 square feet in area. This building could be either a one- or a two-story structure. Construction materials could include brick, wood, glass, and metal.

An enclosed, formalized entry courtyard into the Park, consisting of decorative paving and plantings, would be located between the new Community Center Activities Building and the new Community Center Gymnasium (Figure 2-1). This entry courtyard would be a defined entry point where none currently exists. A pond with fountains would be located to the northwest of the entry courtyard, and separated from the courtyard elevation by a series of seating steps and ramps leading to a picnic terrace (Figure 3-2).

Jefferson Park currently lacks formal entrance points and gateways. The proposed new and enhanced entrance points would consist of architectural features, signage, and evening lighting that would create defined entryways in contrast to the existing informal and largely undefined points of entry. The entry courtyard would bring needed definition to the Park, improving its aesthetics. The new Community Center Activities Building and Gymnasium would also serve to strengthen the sense of arrival to the Park.


Adjacent to the north of the new Community Center Activities Building would be four new tennis courts along Beacon Avenue South. Two new basketball courts would be constructed south of the new Community Center Gymnasium and west of the new parking area. A 28-space parking area would be constructed immediately to the south of the new gymnasium and existing Community Center. This parking would be accessed via the separated parking strip along Beacon Avenue South. (See Figure 2-1.)

Following construction, the look of the grassy bench area (the Terrace), located on the west edge of the Park along 15th Avenue South, would change from primarily grass to a combination of grass, plants, shrubs, trees, and pedestrian pathways. The existing slope would be modified at its midpoint to create the Terrace area (Figures 2-1 and 3-2). A 30-space public parking area would be constructed along 15th Avenue North just north of South Dakota Street. An interpretive kiosk/picnic shelter would be located to the north of the parking area along a pedestrian path. The shelter would likely be a covered, open-sided structure with interpretive panels and picnic seating in the interior. The structure would be one story of approximately 150 square feet. Construction materials would likely include a combination of wood and metal, and provide a needed focal point for entry from this location.





**FIGURE 3-2.**  
ALTERNATIVE A - INTERIM PLAN  
(AERIAL VIEW LOOKING SOUTHWEST)  
JEFFERSON PARK SITE PLAN EIS  
SEATTLE, WASHINGTON

 NORTH No Scale	File name: 22010interim.ai Original Graphic by: ACT Edits by: Date: 5/6/02
	Source: The Portico Group.



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Views north across the park from areas such as the lawn bowling facility would now contain the Great Meadow area in place of the existing open water of the North Reservoir enclosed by 12-foot chain-link fencing. The Great Meadow would consist of a grassy, landscaped area containing amenities such as water features, pedestrian paths, benches, and picnic tables (Figure 3-2).

Jefferson Field would be renovated to include field lighting, synthetic turf, improved drainage, irrigation at perimeter areas, and a removable/coverable Samoan cricket pitch. The playfield would be used primarily for soccer and Samoan cricket. New restrooms and a picnic shelter would be added at the southeast corner of the playfield area. From a distance the playfield area would look generally the same as the existing facility. Visitors on or near the playfield, however, would notice the new picnic shelter and restroom buildings and the upgraded look of the field itself. The restroom facility would be approximately 440 square feet in size and would be constructed primarily of masonry, wood, and/or metal. The picnic shelter would be approximately 750 square feet in size and would be similar in design to that described above for the picnic shelter at the Terrace. The final location of the picnic shelter and restroom facility would be determined during final design of Jefferson Field. The visual quality of the playfield would be improved following construction of the proposed improvements.

The addition of a traffic signal at the intersection of 15th Avenue South and South Dakota Street would add a new visual element to the streetscape for vehicles using the roadway and for nearby residents. The traffic signal would be a standard configuration of supporting poles, connecting cables, and the traffic signals themselves. No adverse aesthetic effect is expected as a result of the construction of this new traffic signal as it would be the same as other signals located in the vicinity of the project.

**Light and Glare.** Following construction, the new basketball and tennis courts could be lit from dusk until 11 p.m. Additional lighting would be added to the project area in the form of security lighting for entrances and pathways during evening hours. Jefferson Field would also be lit during evening hours when in use and could remain on until 11 p.m. Jefferson Field is currently not lit. Residences to the west of the playfield would notice additional light above that provided by the street lighting. These residences are separated from the playfield by 16th Avenue South, an approximate 20- to 40-foot grade difference, mature evergreens at the top of the playfield plateau, and garage/shed structures at the 16th Avenue South level. Additional light from the playfield is not expected to negatively affect these residences due to the horizontal distance from the field, screening by existing and planned trees, light shielding, and grade change. Users of the Veterans Affairs Medical Center would notice the additional light in the playfield area during evening hours, but are not expected to be negatively affected due to grade differences and distance.

### **Alternative B – Long-range Plan**

Alternative B would include all of the improvements described for Alternative A in addition to the improvements described below.

#### **Construction**

**Aesthetics.** Impacts to views of the South Reservoir area during construction of the new buried reservoir and new park improvements would be generally the same as those described above for the North Reservoir area. The South Reservoir would continue to be a functional reservoir but

would be buried and would itself not create any substantial visual impact. In the event a decision is made to reconstruct SPU's South Reservoir into a buried reservoir, a separate environmental analysis would be prepared to address construction-related improvements.

Construction of the pedestrian overpass would result in temporary visual impacts to the residents located adjacent to the proposed location of the overpass' north landing. Construction equipment and materials, dust, and mud would be visible to the residents in these homes. These impacts would be temporary and would likely last up to a few months.

**Light and Glare.** No additional light and/or glare would occur as a result of construction activities associated with Alternative B.

### **Operation**

**Aesthetics.** Impacts to views of the South Reservoir area following construction would be similar to that described above for the North Reservoir. The South Reservoir area (Sports Plateau) would contain a dedicated baseball field, a dedicated soccer field, and a running track. These fields would be supported by a concession facility and restrooms located between the two fields. Pedestrian paths would connect these fields to the rest of the park. (See Figures 2-1 and 3-3.)

Picnic grounds would be constructed southeast of the baseball field near the Sports Plateau and would be a grassy, landscaped area. A picnic shelter would be located between the Jefferson Promenade and the 9-hole golf course. This structure would be constructed primarily of masonry, wood, and/or metal, and would be similar in design to the picnic shelter described for the Terrace in Alternative A.

Views north across the park from areas such as the lawn bowling facility would be greatly improved with a more diverse and park-like area in the foreground rather than two large open-water features surrounded by chain-link fencing. These views would include landscaping, playfields, and other artistic and recreational amenities such as water features, benches, and picnic tables.

Views from surrounding streets to the new interior park space of the Sports Plateau would change from 7-foot tall chain-link fencing to an open, grassy area with soccer goals, a baseball backstop, accessory park buildings, and plantings. The new views would be more consistent with a park aesthetic. The accessory buildings would be small in scale and would be built primarily of masonry, wood, and/or metal. Design of these facilities would be similar to that described for similar facilities under Alternative A. Because of its location at approximately the middle of the park in the east-west direction and the elevation differences between adjacent areas and the park itself, the buildings, goals, and backstop would not be visible to all viewers from adjacent residences or roadways. The Sports Plateau would also be screened from Beacon Avenue South by the driving range and the Community Center buildings.

The addition of a pedestrian overpass across South Spokane Street would affect views for pedestrians and passengers in vehicles traveling east and west along this street. The north landing for the overpass would be located in the right-of-way between 16th and 17th Avenues South and South Spokane Street. This structure is expected to be approximately 400 feet in length and 10 feet in width and will terminate at the northwest corner of the park near the Overlook above South Spokane Street. Figure 3-4 shows an example of the kind of overpass structure that could be used at Jefferson Park. Construction materials would most likely be steel and concrete. Vehicle passengers would notice the structure as they move along the roadway; the structure would only be visible for





**FIGURE 3-3.**  
 ALTERNATIVE B - LONG-RANGE PLAN  
 (AERIAL VIEW LOOKING SOUTHWEST)  
 JEFFERSON PARK SITE PLAN EIS  
 SEATTLE, WASHINGTON

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Source: The Portico Group.





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Original Graphic by: ACT  
Edits by:  
Date: 5/3/02

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Source: Adolphson Associates, Inc.

**FIGURE 3-4.**  
**OVERPASS EXAMPLE (PHOTO OF WRQ OVERPASS ON WESTLAKE AVE.)**  
**JEFFERSON PARK SITE PLAN EIS**  
**SEATTLE, WASHINGTON**



a short time (e.g., up to a couple of minutes if stopped at a traffic signal, a few seconds if moving). Pedestrians in the area would see a new feature that would add diversity to the landscape both vertically and horizontally. With thoughtful design and use of visually interesting materials, impacts to vehicle passengers and pedestrians are not expected to be substantial.

Residences near the overpass would have an altered view from windows and doors that face south toward the structure. The structure would be oriented in a north-south curve, that changes in grade from street level at 17th Avenue South to an elevation equal to the new Great Meadow area at its south end. The overpass would be supported on its north end by a landscaped embankment; where it enters the park, the ramp would be supported on progressively shorter pilings until it reached the park surface above South Spokane Street. Residences could notice additional shading that would vary in duration and amount over the year. The use of pilings and "see through" design and/or construction materials for the overpass railing would reduce the impacts of shading on these homes. The supporting embankment on the north end would act as a visual and acoustical barrier between the homes adjacent to the embankment to the north and the traffic on South Spokane Street.

**Light and Glare.** If the Sports Plateau fields are not lit, there would not be a noticeable difference in the appearance of the park interior during late evening and nighttime hours.

Should Parks choose to light these fields, nighttime views of the City and Elliott Bay from locations such as the lawn bowling facility, would be substantially affected. The lit area would dominate the immediate foreground and block distant nighttime views of the City. Views from adjacent roadways and residential areas would include a block of light at the location of the fields. The effect of this additional light would be minimal for viewers along Beacon Avenue South, due to the dominance of the existing high-wattage driving range lights. Viewers traveling on 15th Avenue South, ~~and the~~ residences across 15th Avenue South to the west, and residences across South Spokane Street to the north would notice a greater concentration of light than is currently produced by the driving range lights. Lights for the soccer field and running track would be the most noticeable to ~~this the~~ group of viewers to the west of 15th Avenue South as it would be located along the west edge of the bluff above the Terrace (Figure 2-2). Lights for the Sports Plateau could remain on until 11 p.m. when fields are in use. With the exception of a limited number of park users in the vicinity of the lawn bowling facility, impacts associated with lighting the Sports Plateau fields are not expected to be substantial with the implementation of appropriate mitigation measures.

## **Alternative C – No Action**

### **Construction and Operation**

Under the No Action alternative, no major construction or facility expansions would occur, therefore no impacts to existing aesthetics, or light, and glare conditions would occur. Maintenance of existing facilities and minor landscape improvements and enhancements would continue to be conducted on Parks properties in the project area.

## Cumulative Impacts

No additional new large-scale projects are anticipated in the project vicinity, therefore, under Alternative A, cumulative impacts related to light and glare would be minimal.

Under Alternative B, cumulative impacts associated with light and glare would occur as a result of the additive effect ~~if~~of the new lighting for the ballfields on the Sports Plateau, if implemented, together with the existing driving range lights. With the implementation of appropriate mitigation measures, these cumulative impacts are not expected to have a major adverse impact on most viewer groups in the area.

## Mitigation Measures

Mitigation measures to reduce or eliminate aesthetic, light, and/or glare impacts as a result of the project could include the following:

### Aesthetics

#### Alternative A

- Contractor would implement dust suppression measures as needed and required by PSCAA Regulation 1, Section 9.15, Fugitive Dust Control Measures.
- Solid fencing could be considered to screen the areas where construction activity may be dormant for long periods of time or areas where negative aesthetic impacts to residences would be greatest. Consider allowing community to paint fence the with murals or apply other art features to discourage graffiti.
- Extended construction hours for fill placement would occur under appropriate permits from the City of Seattle. Limit these extended hours to the extent possible.
- Lighting, required for extended fill placement, would be oriented to direct light onto the construction area and away from roads and residential areas.

#### Alternative B

- All measures described above for Alternative A would also be implemented for Alternative B.
- The overpass structure could be designed with architectural features that would add interest to the structure and minimize its bulk and scale.
- Use of "see through" design and/or materials for railings on the pedestrian overpass would minimize the effects of shading to nearby residences.
- Plantings should be used to visually enhance the earthen berm at the north end of the pedestrian overpass ramp.
- Localized aesthetic impacts resulting from construction and operation of the pedestrian overpass could be minimized by working with neighbors during the design phase to identify appropriate solutions.

## Light and Glare

### Alternatives A and B

- If lighting is required for evening/nighttime construction activities, lights would be appropriately shielded to direct light to the construction area and directed away from residences and roadways.
- Light fixtures installed at sports fields, sports courts, pathways, and building perimeters would be specifically designed and positioned to minimize light spill-over to areas that do not require lighting. Cutoff fixtures that deliver light directly to the field surface would be used at all sports fields and the running track, if lighting is implemented.

## Significant Unavoidable Adverse Impacts

With the exception of a limited number of park users in the vicinity of the lawn bowling facility, ~~No~~ no significant unavoidable adverse impacts related to aesthetics, light, or glare are expected as a result of construction or operation of park improvements under either Alternative A or Alternative B.

## AIR AND NOISE

This section describes the existing air quality and noise conditions at Jefferson Park and vicinity. Potential impacts to air quality and noise in the area are discussed for construction and operational activities. Information was collected from existing sources and from site visits.

## Affected Environment

### Noise

#### Overview

The human ear responds to a wide range of sound intensities. The decibel scale used to describe sound is a logarithmic rating system that accounts for the large differences in audible sound intensities. This scale accounts for the human perception of a doubling of loudness as an increase of 10 decibels (dBA). Hence, a 70 dBA sound level will sound twice as loud as a 60 dBA sound level. People generally cannot detect differences of 1 dBA; under ideal laboratory conditions, differences of 2 or 3 dBA can be detected. A 5 dBA change would be expected to be perceived under normal conditions. Table 3-1 shows representative sounds and corresponding noise levels produced in decibels.

When addressing the effects of noise on people, it is necessary to consider the frequency response of the human ear. Instruments are therefore designed to respond to or ignore certain frequencies. The frequency-weighting most often used is A-weighting; measurements from instruments using

this system are reported in “A-weighting decibels” or dBA. All sounds in this discussion are reported in dBA.

Factors affecting the impact that a given noise will have on a person include frequency and duration of the noise, the absorbency of the ground and surroundings, and the distance of the receptor from the noise source. The receptor and the usual background noise levels also determine the degree of impact.

**Table 3-1. Sound Levels Produced by Common Noise Sources**

Thresholds/Noise Sources	Sound Level (dBA)	Subjective Evaluations	Possible Effects on Humans
Carrier jet takeoff (50 ft)	140	Deafening	Continuous exposure can cause hearing damage
Siren (100 ft) Loud rock band	130		
Jet takeoff (200 ft) Auto horn (3 ft)	120		
Chain saw Noisy snowmobile	110		
Lawn mower (3 ft) Noisy motorcycle (50 ft)	100	Very Loud	
Heavy truck (50 ft), Bulldozer or backhoe (100 ft)*	90		
Pneumatic drill (50 ft), Loader (100 ft)* Busy urban street, daytime	80	Loud	Speech Interference
Normal automobile at 50 mph Vacuum cleaner (3 ft)	70		
Conversation (3 ft)	60	Moderate	Sleep Interference
Quiet residential area Light auto traffic (100 ft)	50		
Library	40	Faint	Minimal Effects
Soft whisper (15 ft)	30		
	20	Very Faint	
	10		
Threshold of Human Hearing	0		

Source: US Environmental Protection Agency, 1971.

\*U.S. Department of Transportation, 1977

Note that both the subjective evaluations and the physiological responses are continuums without true threshold boundaries. Consequently, there are overlaps among categories of response that depend on the sensitivity of the noise receivers.

Relevant Local, State, and Federal Noise Standards and Guidelines. City of Seattle’s Municipal Code sets forth maximum permissible sound levels (SMC 25.08.410). These noise levels are shown in Table 3-2. Between the hours of 10:00 p.m. and 7:00 a.m. during weekdays, the levels shown in Table 3-2 are reduced by 10 dB(A) where the receiving property lies within a residential district of the City.



**Table 3-2. Maximum Permissible Sound Levels for City of Seattle**

Noise Source	Receiving Property [dB(A)]		
	Residential	Commercial	Industrial
<b>Rural</b>	52	55	57
<b>Residential</b>	55	57	60
<b>Commercial</b>	57	60	65
<b>Industrial</b>	60	65	70

Source: SMC 25.08.410

The City of Seattle has also established noise parameters for construction and equipment operations. Between the hours of 7:00 a.m. and 10:00 p.m. on weekdays, noise levels as described above and listed in Table 3-3, may be exceeded. Specific permissible dB(A) exceedances for construction and equipment operations are outlined in SMC 25.08.425 and summarized in Table 3-3.

**Table 3-3. City of Seattle Permissible Exceedances for Construction and Equipment Operations**

Noise Type	Allowable Time Period (weekdays)	Allowable Exceedance
Equipment on Construction Sites	7:00 a.m. and 10:00 p.m.	25 dB(A)
Portable Powered Equipment	7:00 a.m. and 10:00 p.m.	20 dB(A)
Powered Equipment Used in Temporary or Periodic Maintenance or Repair of Residential Property	7:00 a.m. and 10:00 p.m.	15 dB(A)
Impact Construction Equipment	any one-hour period between 8:00 a.m. and 5:00 p.m.	not to exceed: 90 dB(A) continuously 93 dB(A) for 30 min 96 dB(A) for 15 min 99 dB(A) for 7.5 min

Source: SMC 25.08.425

**Existing Sources of Noise**

Existing sources of noise within and near Jefferson Park include vehicle traffic, voices from nearby facilities (e.g., Asa Mercer Middle School, golf facilities, etc.), and airplane traffic. Vehicle noise and airplane traffic are the main contributors to noise in the area. The Beacon Hill area is located beneath a concentration of air traffic flight patterns (KCIA, 2002) and experiences noise from airplanes throughout both daytime and nighttime hours. Traffic noise is noticeable throughout the project area due to its location between 15th Avenue South on the west, Beacon Avenue South on the east, and South Spokane Street on the north.

## **Air Quality**

### *Climate conditions*

The Jefferson Park project area lies within the Puget Sound basin. The Puget Sound airshed is greatly influenced by urban development, the Pacific Ocean, the mountains, and the weather. The Puget Sound basin has a mild, modified marine climate characterized by cloudy, cool, and wet winters, and relatively dry and mild summers. The average total precipitation for the area is approximately 38 inches. Temperatures range from approximately 69° to 75° F in the summer and from approximately 44° to 50° F in the winter (Western Regional Climate Center, 2001).

Temperatures are generally moderate with few extremely cold or hot days throughout the year. When onshore air flow to the area is interrupted, the combination of urban activities, weather, and topography lead to stagnation and rising air pollution.

### *Existing Conditions*

Air quality within and near Jefferson Park is typical of an urban setting. The project area is located adjacent to three major arterials – Beacon Avenue South, South Spokane Street, and 15th Avenue South. In addition, Interstate-5 is located approximately 0.4 mile to the west of the project area. Vehicle exhaust is the main source of air pollution in the area and is most noticeable near roadways and intersections.

Six "primary pollutants" related to air quality have been identified. They are particulate matter (PM<sub>10</sub>/PM<sub>2.5</sub>), carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulfur dioxide (SO<sub>2</sub>), and lead (Pb). These pollutants are regulated through federal, state, and local standards. The Puget Sound region is currently meeting federal standards for PM<sub>10</sub>, PM<sub>2.5</sub>, carbon monoxide, and ozone (Kirchner, personal communication, 2002). These pollutants are monitored by the Puget Sound Clean Air Agency which enforces local, state, and federal laws and regulations. PM<sub>10</sub> refers to coarse particles, and PM<sub>2.5</sub> refers to fine particles that can be inhaled deeply into the lungs. Carbon monoxide is a colorless, odorless, toxic gas produced by gasoline-powered cars and trucks. Ozone is what is known as "smog" and is produced when nitrogen oxides and volatile organic compounds (from motor vehicles, factories, chemical solvents, and fuel combustion) react with sunshine and high summertime temperatures. The City of Seattle has exceeded the ozone standard on occasion, but has not exceeded up to the violation limit. These pollutants can have detrimental effects to human health and the environment in general (Puget Sound Clean Air Agency, 2002a).

Monitoring data for December 2001 and February 2002 (Puget Sound Clean Air Agency, 2002b, 2002c) show that carbon monoxide 8-hour concentrations, measured at the 4th and Pike (Seattle) monitoring station, for November 2001 through February 2002 did not exceed the Federal standard. PM<sub>10</sub> concentrations did not exceed the Federal standard, but in November and December 2001, and February 2002, met or exceeded the Washington State Clean Air Trigger (Duwamish Valley, Seattle, monitoring station). PM<sub>2.5</sub> 24-hour concentrations reached the "unhealthy for sensitive groups" level in November 2001 but did not reach the "unhealthy" level (Duwamish Valley, Seattle, monitoring station).

## Impacts

### Alternative A – Interim Plan

#### Construction

Construction activities associated with the North Reservoir area park improvements include demolition of the North Reservoir's concrete lining and pipe system, filling and grading to create the Great Meadow, and construction of the Great Meadow amenities such as trails and water features.

**Noise.** Demolition of the concrete lining of the North Reservoir would create substantial noise and vibration impacts to surrounding single- and multi-family homes near the project area. Equipment such as jackhammers and excavators would be used to break up the concrete lining. If the discarded concrete pieces are used on-site, a crusher would also be located in the project area. Under Alternative A, the existing Community Center would be demolished and would also create a substantial amount of noise over a several day period. Demolition equipment would likely operate intermittently throughout the allowable operation hours of 8 a.m. and 5 p.m. in accordance with SMC 25.08.425, Construction and Equipment Operations. Demolition debris that cannot be used as fill would be removed from the project site. This could result in up to 820 round-trip truck trips for debris transport.

Noise from heavy trucks entering and exiting the project area from Beacon Avenue South and/or from South Dakota Street/15th Avenue South could be in the loud to very loud range, based on Table 3-1. The majority of heavy truck trips would occur during the demolition of the North Reservoir and construction of the Great Meadow. A substantial amount of fill would also be brought to the project site for construction of the Terrace. Table 3-4 below summarizes the approximate number of truck trips into and out of the project area. In addition to heavy truck trips, excavation and grading equipment would be present and active throughout the work day. Sound levels from these activities are also in the loud to very loud ranges, similar to the decibel ranges for lawn mowers or motorcycles. Residences to the north and west of the project area would be the most affected by noise and vibration from this phase of construction, which could last up to 24 months. It is possible that heavy truck activity associated with fill placement could occur past typical approved construction hours should a noise variance be approved for this activity. Fill activity could occur into the night, but would be temporary and would terminate once the desired elevation was achieved for the new Great Meadow area.

**Table 3-4. Approximate Number of Truck Trips for Imported Fill Material**

Project Element	Approximate No. of Truck Trips (round trips)
Great Meadow (fill)	14,000
Great Meadow (debris removal)	820
Terrace	3,500
New Community Center Gym	600

Following demolition of the North Reservoir, excavation, and fill activities, the main sources of construction noise would be associated with construction of the new Community Center Activities Building and Gymnasium. This activity would take place near the mid-point of the Park along Beacon Avenue South (Figure 2-1). Users of the existing Community Center, children's play area, and tennis courts would be most affected by noise generated by the construction. Golfers at the driving range and the 18-hole golf course would be affected by the construction noise, but to a lesser degree. Personnel at Fire Station 13 and residents to the north and west of the project area would also likely hear construction-related noise. Construction-related noise would include vehicle and equipment engine noise, noise from large equipment operation (e.g., hydraulic lifting arms, etc.), saws, hammering, scraping, and human voices.

As discussed above, park users in areas such as the existing Community Center, children's play area, tennis courts, lawn bowling and driving range facilities, and residents in the homes and multi-family structures to the north and west of the project area would be affected by the demolition and construction activities associated with the Great Meadow, the Terrace, and the new Community Center Activities Building and Gymnasium. Homes west of 15th and 16th Avenues South and north of South Spokane Street would likely notice an increase in noise during construction activities, but the level of impact would be tempered by the existing noise from traffic along this arterial and airplane traffic overhead. The single-family home at the northeast corner of 15th Avenue South and South Dakota Street would experience a substantial impact from construction-related noise due to its location directly adjacent to the Terrace area and the 15th Avenue South and South Dakota Street construction access point.

Construction of the new traffic signal at 15th Avenue South and South Dakota Street would result in some increases in noise audible to adjacent residents, and passengers in passing vehicles. Noise impacts related to construction of the traffic signal would be minimal due to its scale and short duration.

**Air Quality.** Construction activities would also affect air quality in the project vicinity. Exhaust fumes from construction equipment and vehicles could be detectable to nearby residents and park users at facilities such as the driving range and lawn bowling area. Dust would be generated during demolition, excavation, filling, and grading activities. Exhaust and dust would occur for the duration of demolition, excavation, filling, grading, and construction activities for the various proposed park improvements. Park improvements are likely to be constructed in a phased manner, meaning that impacts from dust and exhaust could occur intermittently for periods of weeks or months over the several-year duration of some project elements.

The existing Jefferson Community Center was constructed in 1929 and remodeled in 1949 and 1972, and could be constructed with asbestos-containing materials. Prior to demolition of this structure to create room for a second gymnasium, the structure must be assessed for the presence of asbestos. Should asbestos be found, demolition activities would include proper removal and disposal of this material off-site per Puget Sound Clean Air Agency (PSCAA) Regulation III, Article 4: Asbestos Control Standards. With the adherence to proper removal and disposal techniques, the potential for fugitive asbestos-containing dust to be dispersed by demolition activities would be small.

Impacts to air quality during construction would be temporary, although they could occur intermittently over a long time period. With implementation of mitigation measures, however, impacts are not expected to substantially affect residents or park users during construction activities.

### Operation

**Noise.** Following completion of the project, noise-related operation impacts would be minor. Nearby residents and users of park facilities such as the driving range, golf course, and lawn bowling facility could notice a small increase in traffic noise. However, due to the presence of Beacon Avenue South, South Spokane Street, and 15th Avenue South, and airplane traffic over the project area, only incremental increases in detectable noise would be expected. During festivals or other large gatherings, an increase in the number of vehicles entering and leaving parking areas would occur. Music, voices (amplified and/or non-amplified), and applause could occur during festivals or other gatherings and would likely be noticed by nearby residents and other park users.

Landscape maintenance activities would continue to occur year-round following completion of park improvements. Equipment such as lawn mowers, leaf blowers, and trimmers would likely be used by Parks personnel. Maintenance activities would occur periodically, with the greatest frequency occurring in spring and summer. Noise from landscape maintenance activities would be short-term and temporary, would occur during typical working hours, and would not be expected to negatively affect nearby residents or park users.

**Air Quality.** Air quality impacts following completion of the proposed Jefferson Park improvements would not be expected to occur as no pollutant- or odor-producing facilities or operations would be introduced as part of the project. Small amounts of exhaust from landscape maintenance equipment would occur throughout the year, with the majority of these emissions occurring during the spring and summer months. A minor increase in vehicle exhaust would occur during large gatherings that attract visitors from outside the immediate vicinity.

## **Alternative B – Long-range Plan**

### Construction

**Noise.** Construction-related noise impacts associated with the construction of the Sports Plateau and the Picnic Grounds in the area of the South Reservoir would be similar to those described above for the Great Meadow and Terrace. Due to its more central location within the park, impacts to residents would likely be less than that for the Great Meadow and Terrace. Residents to the north and west of the park, as well as park users, would likely hear construction equipment and would also hear heavy trucks and other equipment entering and leaving the project site at South Dakota Street and 15th Avenue South (Table 3-5). Residents to the west would experience a greater level of impact from heavy truck traffic than residents to the north, due to their proximity to South Dakota Street which would likely be used for construction access.



**Table 3-5. Approximate Number of Truck Trips for Imported Fill Material**

Project Element	Approximate No. of Truck Trips (round trips)
The Sports Plateau	1,400
Picnic Grounds	1,400

Construction-related noise impacts resulting from construction of the second gymnasium would be the same as described for the first new Community Center Gymnasium and Activities Building in Alternative A.

Impacts from construction noise associated with construction of the pedestrian overpass would be similar to that described above for other park amenities. Construction equipment and vehicles would be present and operative during allowable construction hours. Other noises would include typical construction-type noises such as scraping, thumping, and voices. Residents immediately adjacent to the north of this area would be the most-affected by noise from construction of this park improvement. Passengers in passing vehicles and some park users are also likely to hear construction-related noise. Impacts from this activity would be temporary and short in duration.

Construction-related noise impacts resulting from demolition of SPU's South Reservoir and construction of a buried reservoir in its place would undergo separate environmental evaluation, in the event a decision to bury the reservoir is made.

**Air Quality.** Impacts to air quality as a result of construction of Alternative B would be the same as described above for Alternative A. Vehicle and equipment exhaust as well as dust would occur during excavation, filling, and grading activities associated with the construction of the Sports Plateau and the Picnic Grounds, as well as construction of the second Community Center Gymnasium and the pedestrian overpass.

Impacts to air quality resulting from demolition of SPU's South Reservoir and construction of a buried South Reservoir in its place would undergo separate environmental evaluation, in the event a decision to bury the reservoir is made.

### **Operation**

**Noise.** Operation-related noise impacts would be similar to those described above for Alternative A. Noise impacts specific to the development of the South Reservoir area would include noises typical of organized sporting events. Noise sources could include increased traffic (similar to that described above for Alternative A), referee whistles, cheering and other voices, talking and laughter, and other play- or recreation-related noises.

**Air Quality.** Operation-related impacts to air quality would be the same as described above for Alternative A. Small amounts of equipment exhaust would be produced as a result of landscape maintenance activities and a minor increase in vehicle exhaust would occur during high use periods of the sports fields.

## Alternative C – No Action

### Construction

Under the No Action alternative, limited construction-related noise or air quality impacts would occur as only minor demolition, excavation, grading, or construction activities are expected in order to maintain existing park facilities and operations.

### Operation

Under the No Action alternative, no new noise sources would be added to the park. Noise associated with park activities would remain the same as current conditions.

No new impacts to air quality as a result of operation of the No Action alternative are expected because no major changes to park facilities or operations would occur.

## Cumulative Impacts

~~No additional new large-scale projects are anticipated to be constructed in the project vicinity, therefore no cumulative impacts related to air quality or noise impacts would occur as a result of this project.~~ The Rainier Vista Redevelopment project, located to the southeast of Jefferson Park, is expected to add traffic to the project vicinity (see Transportation section), which would also add vehicle exhaust. No cumulative impacts to air quality are expected when combined with the proposed improvements at Jefferson Park, due to the distance between the projects and seasonal/intermittent use of park amenities.

No cumulative noise impacts are expected due to distance between the projects, nature of project uses, and existing ambient noise levels in the area.

## Mitigation Measures

Mitigation measures to minimize or eliminate noise- or air quality-related impacts could include the following:

### Noise

Alternatives A and B

- Contractors would comply with the City of Seattle Noise Ordinance (SMC 25.08.410) for allowable decibel levels, duration, and hours of construction.
- Extended hours for construction activities associated with fill of the North Reservoir area would occur under the permit conditions of a Noise Variance from the City of Seattle. Limit extended hours to the extent possible.
- Construction vehicles and equipment would contain appropriate noise abatement features such as mufflers.
- Construction vehicles and equipment would not be allowed to idle when not in use.

- Activities would be required to comply with Seattle Noise Ordinance (SMC 25.08.500) that regulates "loud or raucous, frequent, repetitive, or continuous sounds created by a musical instrument or similar device," or "loud or raucous, frequent, repetitive, or continuous sounds made by the amplified or unamplified human voice between the hours of 10:00 p.m. and 7:00 a.m.

## **Air Quality**

### Alternatives A and B

- Construction vehicles and equipment would be properly maintained to reduce pollutant levels in exhaust plumes in accordance with Puget Sound Clean Air Agency (PSCAA) Regulation I, Section 9.20, Maintenance of Equipment.
- Construction vehicles and equipment would not be allowed to idle when not in use.
- Contractors would comply with PSCAA Regulation I, Section 9.15, Fugitive Dust Control Measures. Appropriate measures include, but are not limited to:
  - use of control equipment, enclosures, and wet/chemical suppression techniques;
  - surfacing roadways and parking areas with asphalt, concrete, or gravel;
  - treating temporary, low-traffic areas with water or chemical stabilizers, reducing vehicle speeds, constructing pavement or rip-rap exit aprons, and cleaning vehicle undercarriages prior to exit to prevent track-out of mud or dirt onto paved public roadways; or
  - covering or wetting truck loads or allowing adequate freeboard to prevent the escape of dust-bearing materials.
- Jefferson Community Center demolition would comply with PSCAA Regulation III, Article 4: Asbestos Control Standards. This would include notification and payment of required fee, and compliance with removal and disposal requirements.

## **Significant Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts related to noise or air quality are expected as a result of the proposed improvements under either Alternative A or Alternative B.

## **TRANSPORTATION**

[Note to Readers: Due to a printing error, pages 3-30 and 3-31 of the Transportation section of Chapter 3 were not included in the Draft EIS published in May 2002. These pages are included in this Final EIS.]

## **Affected Environment**

This section includes descriptions of the existing and future roadway network, traffic volumes, traffic operations, safety, levels of service, transit facilities, and non-motorized facilities. Figure 1-1 shows the project area location and vicinity of Jefferson Park in Seattle.

## **Site Description**

Jefferson Park is located in Seattle's Beacon Hill neighborhood east of Interstate 5 (I-5). The project area is bounded by South Spokane Street to the north, Beacon Avenue South to the east, 15th and 16th Avenues to the west and Mercer Middle School and the Veterans Affairs Medical Center to the south. The park includes the Jefferson Park Golf Course, the Jefferson Community Center, and Jefferson Lawn Bowling. Other amenities at the existing park include a basketball court, a children's play area, public restrooms, picnic tables, a driving range, and tennis courts. In the southwest corner of the park, there are play fields used for baseball, softball, soccer, and Samoan cricket. The Citywide Horticulture facility is located on the west side of the park at approximately South Dakota Street. There are two water reservoirs on the site located in the northern half of the park.

## **Roadway Network**

The study area for this transportation analysis was determined based on the potential effects of the proposed improvements included in the Jefferson Park Site Plan project. These potential effects are described in detail later in this report. The study area for the transportation analysis is shown on Figure 3-5 and includes the following intersections and associated roadways:

- South Spokane Street/Beacon Avenue South
- South Columbian Way/Beacon Avenue South
- South Dakota Street/15th Avenue South

As described further in this section, these intersections were selected based on the distribution and assignment of new trips to the study area. These are the intersections that would experience the largest increases in new project-related traffic or would be most affected by the improvements planned for the project area.

The study area intersections and the associated roadways are described below:

**Beacon Avenue South** is an arterial that provides access from northwest Beacon Hill at Holgate Street to south Seattle near Boeing Field. It represents the east boundary of the project site. Along the site frontage, Beacon Avenue South is a three-lane roadway—one lane in each direction plus a center left-turn lane. The posted speed limit is 30 mph. The largest portion of the Jefferson Park Golf Course is located opposite the project site on the east side of Beacon Avenue South. On the east side, there is no sidewalk but there is a gravel walking path alongside the chain link fence separating the golf course from the Beacon Avenue South right-of-way. On the west side of the roadway, between the roadway and the park, there is a long narrow parking lot with several access driveways. There are three mid-block crosswalks evenly spaced along the park frontage. Each crosswalk has pavement markings, textured pavement, and is signed with flashing yellow lights and crosswalk signs.

The intersections of South Spokane Street/Beacon Avenue South and South Columbian Way/Beacon Avenue South have distinctive features. On the south leg of the South Spokane Street/Beacon Avenue South intersection, the northbound lane widens from one lane to three lanes and includes a left-turn lane, a through lane, and right-turn lane. In addition, there is a six-foot bike

lane striped between the through lane and the right-turn lane. There are pedestrian actuated signals at the crosswalks, and at the wheelchair ramps there are lowered pedestrian buttons. On the north and south legs of the South Columbian Way/Beacon Avenue South signalized intersection, there is a 20-foot wide median dividing northbound and southbound movements.

**15th Avenue South** is a north-south arterial that provides access along the western side of Beacon Hill parallel to Interstate-5 (I-5). It represents the west boundary of the northern portion of the project site. The primary north-south travel route along 15th Avenue South bends west onto Columbian Way South toward the West Seattle Bridge and I-5 ramps. North and south of the site, 15th Avenue South provides access to both residential and small local commercial areas. The roadway has curb, gutter, and sidewalk on both sides. Near the project site, there is some on-street parking allowed in the outside travel lanes. However, this parking is restricted during peak hours (7-9 A.M. and 4-6 P.M.).

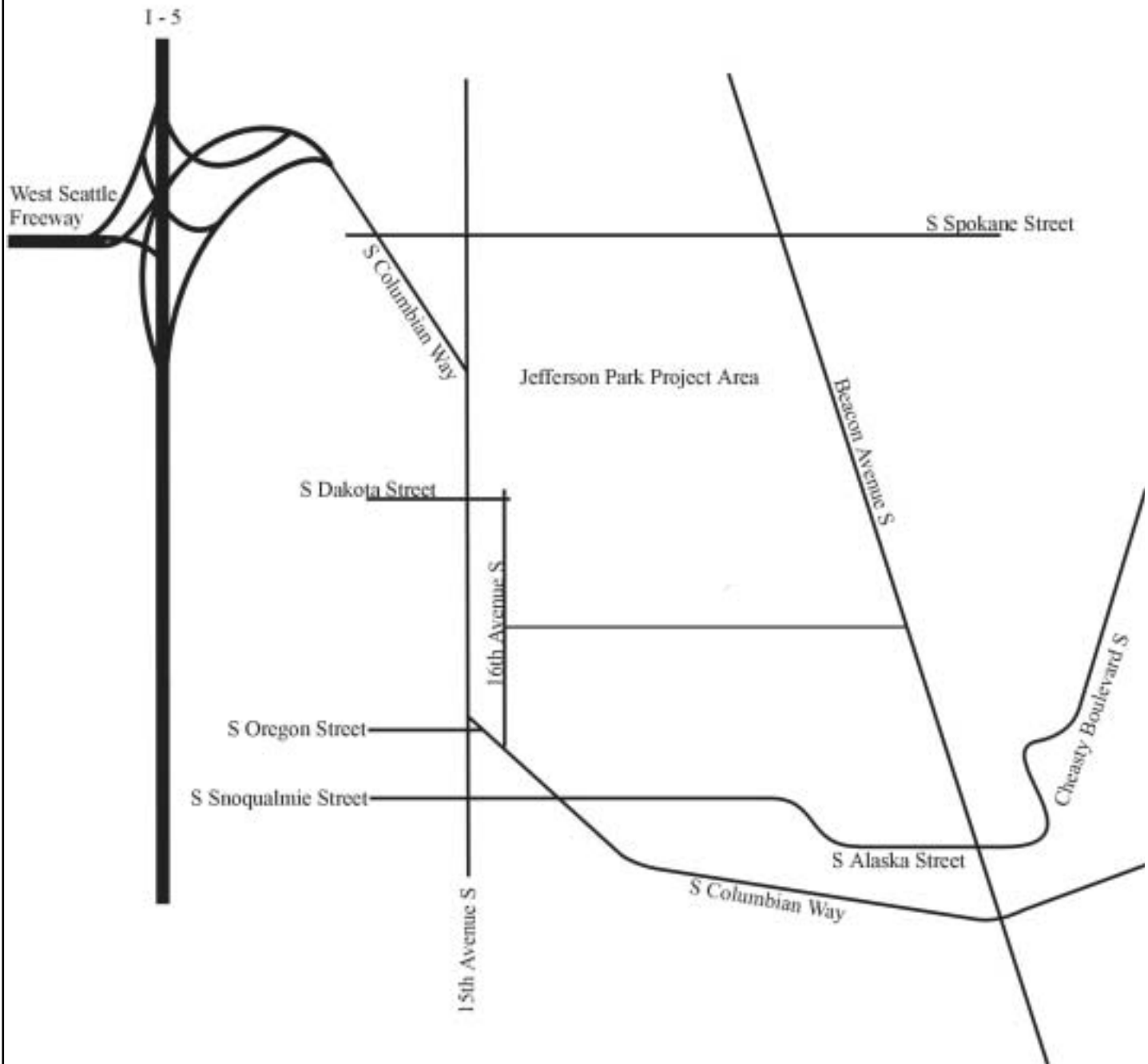
**South Spokane Street** is an east-west arterial that provides access from Columbian Way South to 24th Avenue South. It represents the north boundary of the Jefferson Park site. West of Beacon Avenue South it is a four-lane roadway with two lanes in each direction. East of Beacon Avenue South, it narrows to two lanes. South Spokane Street ends at Columbian Way to the west and at 24th Avenue South to the east. On the north side of South Spokane Street, there is curb, gutter, a planting strip, and a sidewalk. On the south side of the roadway, adjacent to the park, there is curb and gutter, a landscape area, and a gravel path. The areas north of South Spokane Street are residential and several roadways provide direct unsignalized access to South Spokane Street. The intersections with the side streets are stop sign controlled with an all-way-stop-controlled intersection at 23rd Avenue South. South Spokane Street's intersections with the Beacon Avenue South, 15th Avenue South, and South Columbian Way are signalized.

**South Columbian Way** is an arterial that provides access from I-5 and the West Seattle Bridge to 15th Avenue South where the westernmost section ends at approximately South Charlestown Street. Approximately 2,000 feet south of South Charlestown Street (just north of South Oregon Street), the primary travel route along 15th Avenue South bends to the southwest and becomes South Columbian Way. This section of Columbian Way provides access from 15th Avenue South to Martin Luther King Jr. Way South. South Columbian Way is a four-lane roadway with two lanes in each direction. Between Beacon Avenue South and 15th Avenue South, the roadway has gravel shoulders and sidewalk on both sides.

**South Dakota Street** is a local access residential street that provides access from the west side of Jefferson Park west to 12th Avenue South. The roadway has two narrow lanes in each direction. Residents park on both sides of the roadway. On-street parking narrows the effective travel way to one lane as is typical on many Seattle neighborhood streets.

**16th Avenue South** is a north-south local access roadway that provides access between South Dakota Street and South Columbian Way. It represents the western boundary of the southern portion of the Jefferson Park site. Between South Dakota Street and South Spokane Street, the roadway is closed to public traffic and is signed for authorized vehicles only. It serves as an access driveway for the Seattle Public Utilities Water Quality Lab. South of South Dakota Street, 16th Avenue South provides access to residences on the west side and Mercer Middle School on the east side. Its intersection with South Columbian Way is a "T" intersection and the southbound approach





NORTH  
No Scale

File name: 22010transport.ai  
Original graphic by: ACT  
Edits by:  
Date: 5/1/02

Source: Heffron Transportation, Inc.

**FIGURE 3-5.**  
TRANSPORATION STUDY AREA  
JEFFERSON PARK SITE PLAN EIS  
SEATTLE, WASHINGTON

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is controlled by a stop sign. The roadway pavement and right-of-way are narrow. Parking exists in gravel areas adjacent to Mercer Middle School and adjacent to local residences outside of utility poles along the roadway. The parking is restricted to bus parking only between 7:00 to 9:00 A.M. and 2:00 to 4:00 P.M. There is sidewalk along the east side of the roadway adjacent to the middle school and athletic fields.

Based on the City of Seattle's *2002-2007 Adopted Capital Improvement Program* (2002a), there are no major transportation improvement projects proposed for the study area. Therefore, existing geometric and signal conditions were assumed to remain for future year 2010 conditions.

### **Traffic Volumes**

Traffic volume data were collected from several sources. Peak hour turning movement data as well as 24-hour machine counts were obtained from the City of Seattle along roadways surrounding the site. These include: Beacon Avenue South, 15th Avenue South, and South Spokane Street. New weekday afternoon peak hour turning movement counts were performed specifically for this project in April 2002 at the three study area intersections listed previously.

To identify the analysis time period, seven-day machine counts along the key arterials surrounding the site were compiled to show the volume of traffic during each hour of the day. These counts were taken on Beacon Avenue South, 15th Avenue South, and South Spokane Street in May and June of 2001 by the City of Seattle. To understand how traffic uses surrounding roadways on both weekdays and weekend days, traffic volumes for one of the roadways, Beacon Avenue South are presented below. The total traffic volumes were plotted for both weekdays and Saturdays. Figure 3-6 shows the comparison of weekday to Saturday traffic on Beacon Avenue South in the site vicinity. As shown, the average weekday peak traffic volume occurs between 4:00 and 5:00 P.M. and is more than 40 percent higher than the Saturday peak volume, which occurs between 12:00 and 1:00 P.M. Similar trends were observed from the data for 15th Avenue South and South Spokane Street. Since weekday peak traffic is significantly higher than Saturday peak traffic, the analysis for this project will focus on weekday conditions.

The traffic data shown in Figure 3-6 also indicates that the P.M. peak hour traffic volume is approximately 38 percent higher than the A.M. peak hour volume (8:00 to 9:00 A.M.), and nearly 60 percent higher than the midday volume (1:00 to 2:00 P.M.). Similar trends were observed from the data for 15th Avenue South and South Spokane Street. Based on these data, all traffic operations analyses were focused on the P.M. peak hour. Existing traffic volumes for study area intersections are shown on Figure 3-7.

Elements of the proposed Jefferson Park renovation could begin over the next few years. However, much of the work may not be complete for several years due to funding availability and associated funding processes. Based on information from Parks, all of the project elements could potentially be complete before 2010. Therefore, to represent conditions when the project will likely be fully complete and in use, year 2010 was assumed for all future year analyses—eight years from existing conditions. To estimate future year 2010 traffic conditions without the proposed project, two elements of potential traffic growth were considered. First, compound annual growth rates were applied to existing traffic volumes at study area intersections. Then project traffic from planned developments was added. The following describes the year 2010 traffic forecasting method.

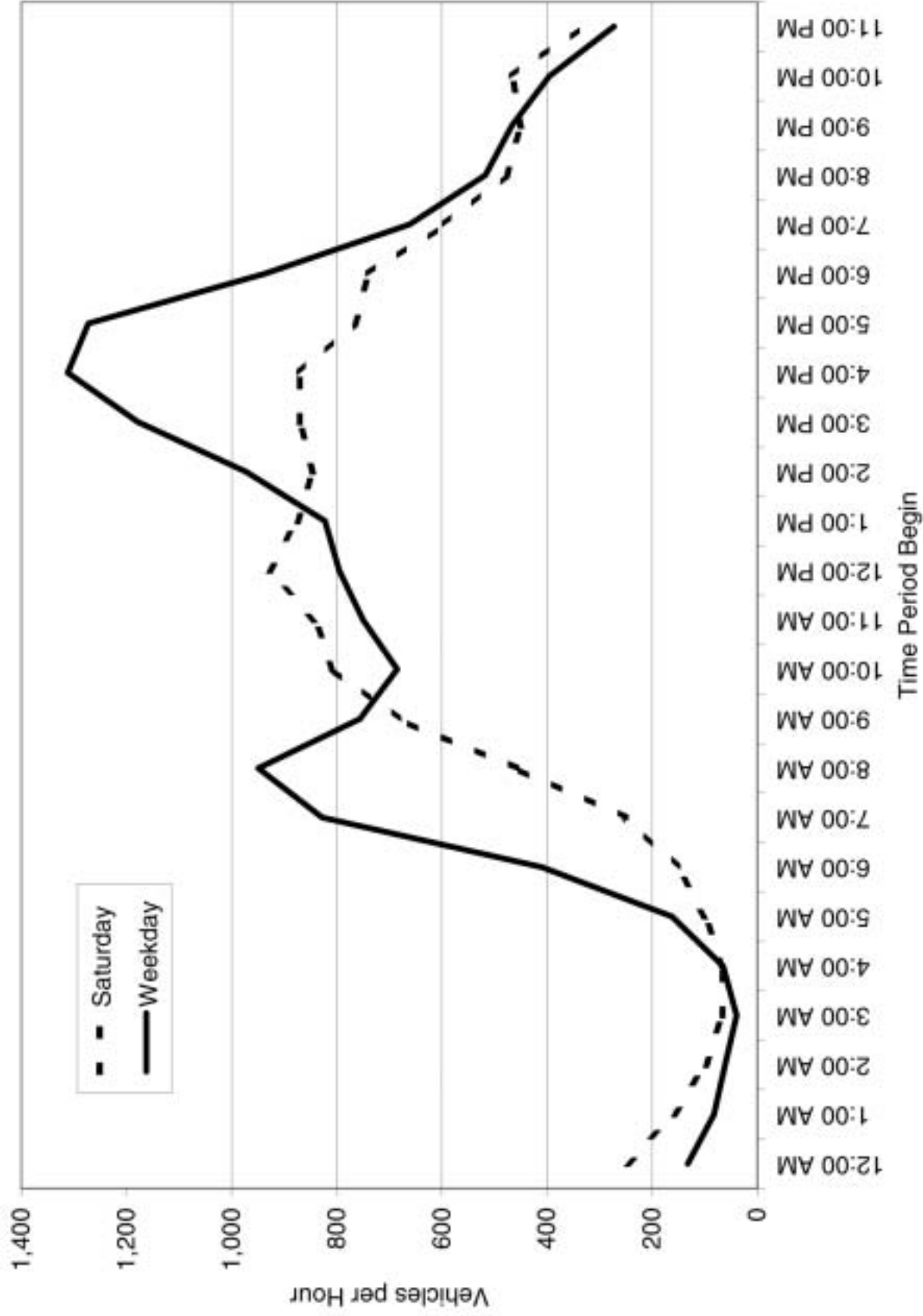
Growth rates for each intersection were developed based on historical traffic counts performed by the City of Seattle from 1993 to 2001. Over this eight-year period, traffic on the study area roadways increased modestly. Volumes on 15th Avenue South and South Spokane Street increased by slightly more than 1 percent per year. Traffic volumes on Beacon Avenue South actually declined by about 1 percent per year over the previous eight-year period. Based on these historical data, a 1.3 percent compound annual growth rate was applied to traffic on 15th Avenue South and at the South Dakota Street/15th Avenue South intersection. To provide a conservative worst-case estimate of 2010 traffic on Beacon Avenue South, a 1.0 percent growth rate was applied to study area intersections with South Spokane Street and South Columbian Way. The growth rates are intended to account for increases in traffic passing through the study area and traffic generated by developments that have not yet applied for permits or are unknown at this time.

Traffic from planned developments was also added. The City of Seattle's Department of Design Construction and Land Use (DCLU) was contacted to determine what projects should be included. The City indicated two planned developments were in the vicinity and should be considered: the Rainier Vista Redevelopment and the Andover Court project. In addition, DCLU indicated the Link Light Rail project should be addressed in the analysis where appropriate. Project traffic assignments were obtained for the referenced projects. The Andover Court project is not expected to add traffic to study area roadways or intersections (source: *Revised Transportation Analysis: Andover Court*, The Transpo Group, January 2, 2001). The Rainier Vista Redevelopment would likely add traffic to all three study-area intersections. Project traffic from Alternative 3, which would result in the largest increases on study area roadways, was added to background traffic estimates (source: *Rainier Vista Redevelopment EIS*, Shapiro & Associates, May 2, 2001). Potential new traffic that could be generated by the Beacon Hill Link Light Rail station was also added. Although the traffic assignments from the *Central Link Light Rail Transit Project DEIS, Transportation Technical Report* (Sound Transit, December 1998) did not include intersections near Jefferson Park, the trip assignments prepared for the Beacon Hill Station were used to estimate potential increases at study area intersections for this analysis.

Forecast 2010 without-project P.M. peak hour traffic volumes are shown on Figure 3-8. As will be described later, the forecast 2010 traffic volumes also represent conditions with the No Action Alternative.

### **Traffic Operations**

The quality of traffic flow is defined by level of service (LOS). Levels of service are qualitative descriptions of traffic operating conditions. These levels of service are designated with letters ranging from LOS A, which is indicative of good operating conditions with little or no delay, to LOS F, which is indicative of stop-and-go conditions with frequent and lengthy delay. Level of Service D is acceptable within the City of Seattle. The existing traffic operating conditions in the study area were analyzed using the methodologies in the *Highway Capacity Manual 2000* (Transportation Research Board Special Report 209, 2000). All level of service analyses were performed using the *Synchro 5.0* analysis software which is widely used by the City of Seattle to evaluate traffic operations.

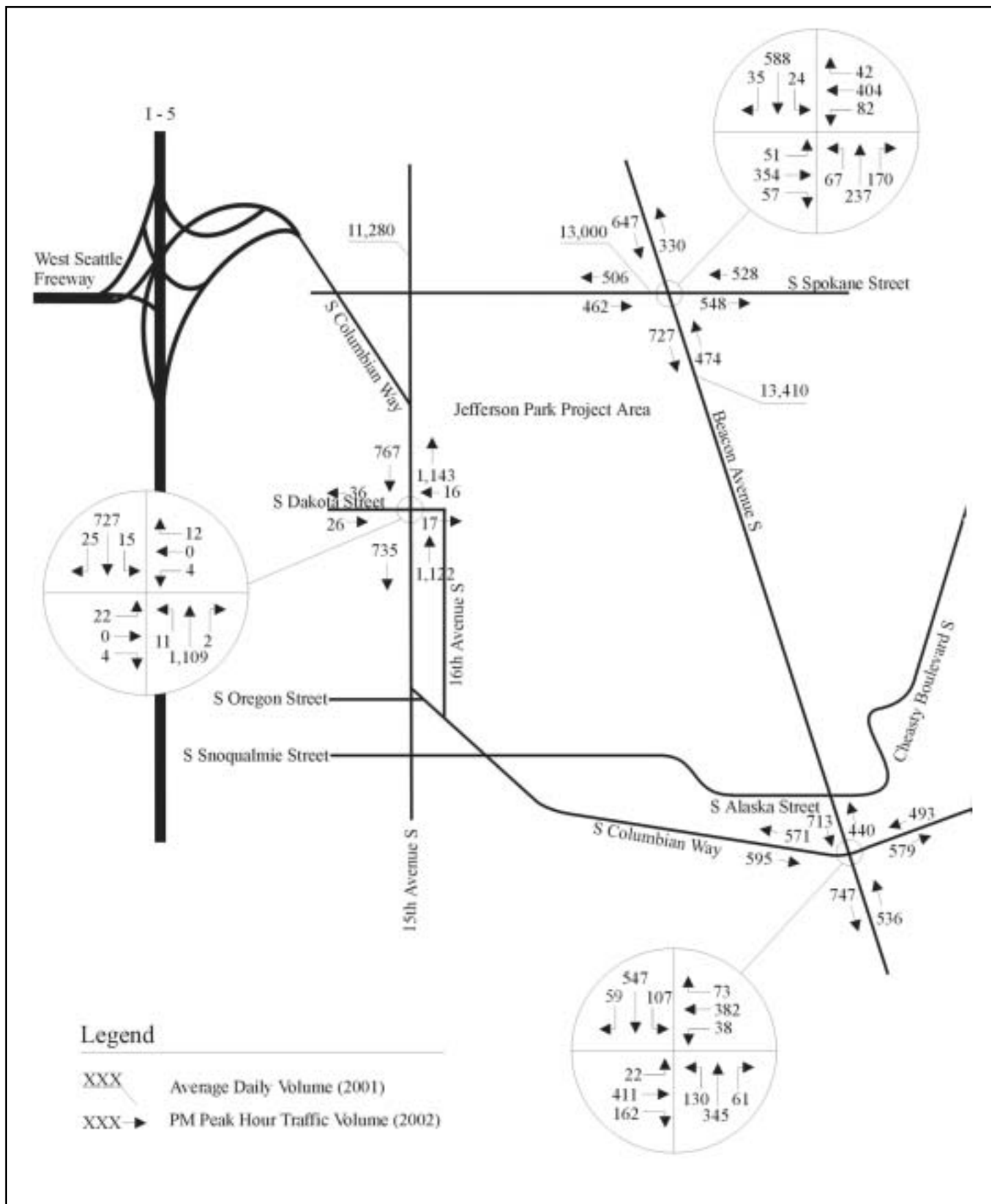


**FIGURE 3-6.**  
 HOURLY TRAFFIC VOLUMES ON BEACON AVENUE S - WEEKDAY VS. SATURDAY  
 JEFFERSON PARK SITE PLAN EIS  
 SEATTLE, WASHINGTON

File name: 22010table.ai  
 Original Graphic by: ACT  
 Edits by:  
 Date: 4/15/02

Source: Heftron Transportation, Inc.





**FIGURE 3-7.**  
EXISTING STUDY AREA  
JEFFERSON PARK SITE PLAN EIS  
SEATTLE, WASHINGTON

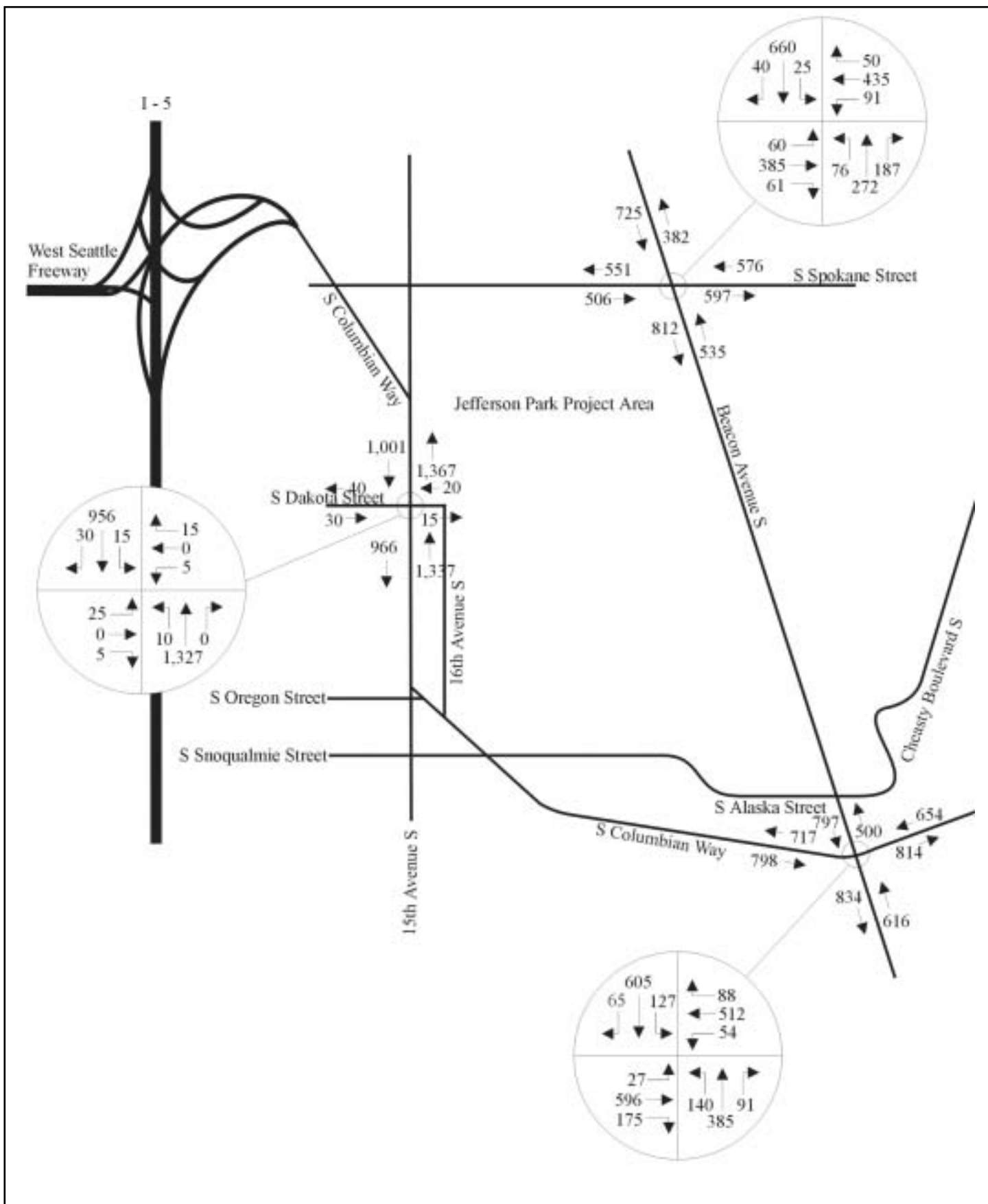


NORTH  
No Scale

File name: 22010existing.ai  
Original graphic by: ACT  
Edits by:  
Date: 5/1/02

Source: Heffron Transportation, Inc.





NORTH  
No Scale

File name: 22010forecast.ai  
Original graphic by: ACT  
Edits by:  
Date: 5/1/02

Source: Heffron Transportation, Inc.

**FIGURE 3-8.**  
**FORECAST 2010 (NO ACTION)**  
**PM PEAK HOUR TRAFFIC VOLUMES**  
**JEFFERSON PARK SITE PLAN EIS**  
**SEATTLE, WASHINGTON**

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Table 3-6 summarizes the P.M. peak hour levels of service at the three study area intersections. The signalized intersections all currently operate at LOS C. Increase in background traffic would degrade the South Columbian Way/Beacon Avenue South intersection to LOS D, which would still be acceptable. At the unsignalized intersection of South Dakota Street/15th Avenue South, heavy through volumes on 15th Avenue South result in LOS F conditions for eastbound turns from South Dakota Street. This delay would be exacerbated by background traffic growth along 15th Avenue South by year 2010. Operations of westbound movements would also be degraded to LOS F by year 2010 due to anticipated increases in background traffic along 15th Avenue South.

**Table 3-6. Level of Service Summary – Existing and 2010 (No Action) Weekday Conditions**

Signalized Intersections	Existing (2002) PM Peak Hour			Forecast 2010 Without-Project (No Action)		
	LOS <sup>1</sup>	Delay <sup>2</sup>	v/c <sup>3</sup>	LOS	Delay	V/C
S Spokane Street/Beacon Avenue S	C	26.7	0.65	C	29.6	0.71
S Columbian Way/Beacon Avenue S	C	21.9	0.67	D	46.4	0.83
Unsignalized Intersections	LOS		Delay	LOS		Delay
S Dakota Street/15th Avenue S						
Northbound left from 15th Ave S	A	0.4		A	0.5	
Southbound left from 15th Ave S	A	0.9		A	1.1	
Eastbound turns from Dakota St	F	72.3		F	237.6	
Westbound turns from Dakota St	D	32.7		F	63.4	

Source: Heffron Transportation, Inc., 2002

1. LOS = Level of Service

2. Delay = Average delay per vehicle in seconds

3. v/c = Volume-to-capacity ratio

## Parking

### On-Site Parking

The largest amount of parking for Jefferson Park is primarily located along the eastern edge of the Park. This parking is located within the Beacon Avenue South right-of-way (Beacon right-of-way parking) along its western edge. There are approximately 334 parking spaces in the long, narrow Beacon right-of-way parking area that extends approximately 2,800 feet along the Beacon Avenue South frontage beginning south of Seattle Fire Department Station 13. There are six entrances/exits from Beacon Avenue South that provide access to the Beacon right-of-way parking and divide it into segments. The drive aisle is one lane and designated one-way southbound.

Of the 334 Beacon right-of-way parking spaces, the northernmost 59 spaces (between the northernmost two entrances/exits) are located closest to the Jefferson Community Center and children's play area. The 164 spaces located between the second and fourth entrances/exits are located in close proximity to the Jefferson Park Driving Range, Club House, and Golf Course. The 111 spaces located between the fourth and sixth entrances/exits are located along the east side of the Veterans Affairs Medical Center property and parking lots.

In addition to the Beacon right-of-way parking, there are approximately 15 parking spaces located west of the lawn bowling facility, and 5 spaces located behind the existing Community Center.

On the west side of the Park, there is a small parking lot provided adjacent to the Citywide Horticulture facility that has 18 striped spaces and additional gravel areas for parking. South of the Citywide Horticulture facility there is more parking for employees and fleet vehicles.

Utilization of Beacon right-of-way parking along Beacon Avenue South was measured over four days in April 2002 (April 4 through April 7). The weekday counts were performed during the mid-afternoon to capture the period when recreational activity increases (after school and for those leaving work early) as well during the evening when attendance or spectator events are sometimes held at the community center. During the utilization counts the weather was relatively clear and dry with temperatures in the low 50s. As a result, the counts likely represent average conditions for the existing Jefferson Park usage. During summer times, usage and parking demand would be noticeably higher; during winter months, the usage and parking demand would be considerably lower. As summarized in Table 3-7 below, the overall utilization of the Beacon right-of-way parking averaged 67 percent during the weekday afternoon and 10 percent during the weekday evening. It should be noted that utilization peaked at 85 percent on Thursday afternoon of the counts. The highest utilization during this period occurred at the southern portion of the lots and was likely a result of high activity at the golf course and other golf facilities. The average weekend afternoon utilization was approximately 32 percent. Again the highest utilization was for parking closest to the golf facilities.

Special events are also occasionally hosted at the Park including Halloween Carnival, the Luau, and the Beacon Hill Festival. Typically, these events do not have distinct short-term activity peaks, but instead result in several hours of in-and-out traffic flows by attendees. For these events, parking demand may exceed the supply in areas closest to the event.

**Table 3-7. Beacon ROW Parking Utilization Results**

<b>Time Period</b>	<b>Average Number of Vehicles in ROW Parking</b>	<b>On-Street Parking Utilization*</b>
Weekday Afternoons (3-4 P.M.)		
Thursday, April 4, 2002	285	85%
Friday, April 5, 2002	161	48%
<b>Average</b>	<b>224</b>	<b>67%</b>
Weekday Evenings (7-8 P.M.)		
Thursday, April 4, 2002	29	9%
Friday, April 5, 2002	32	10%
<b>Average</b>	<b>32</b>	<b>10%</b>
Weekend Afternoons (3-4 P.M.)		
Saturday, April 6, 2002	111	33%
Sunday, April 7, 2002	103	31%
<b>Average</b>	<b>108</b>	<b>32%</b>

Source: Heffron Transportation, Inc., 2002.

\* Based on total ROW parking supply of 334 spaces.

### *Near-by Parking Facilities*

There are other land uses near Jefferson Park that have off-street parking capacity. ASA Mercer Middle School is located just south of the southwest corner of Jefferson Park. It has on-site parking that is accessed from both South Columbian Way and 16th Avenue South. This parking is currently used by people playing sports at Jefferson Field. There are some limitations to parking in these lots due to after school activities. The school lots close at dusk. The Veterans Affairs Medical Center has a large parking facility that can be accessed from both South Columbian Way and Beacon Avenue South. The Veterans Affairs Medical Center employees may also choose to park in the southern portions of the Beacon right-of-way parking described previously. This parking demand primarily occurs on weekdays.

South of the Veterans Affairs Medical Center, there is median parking located between the northbound and southbound lanes of Beacon Avenue South. There are a total of 24 spaces located in the median north of South Columbian Way, and 48 spaces located in the median south of South Columbian Way. Eight of the spaces south of Columbian Way are restricted to two-hour parking between 7:00 A.M. and 6:00 P.M. (except Sundays and holidays). Utilization counts indicate the average utilization of these spaces is 65 percent on weekday afternoons, 40 percent on weekday evenings, and 53 percent on weekend afternoons.

### *On-Street Parking*

On-street parking within the site vicinity was also documented. An on-street parking utilization study was performed according to guidelines developed by the City of Seattle in its Client Assistance Memorandum (CAM) #117 (Table 3-8). This memorandum defines the study area for a parking utilization study as “an area which is within a 400-foot walking distance of the subject property.” This study includes all roadways within 400 feet of the project area (bounded on the north by South Spokane Street, on the south by the Veterans Affairs Medical Center and Mercer Middle School properties, on the east by Beacon Avenue South, and on the west by 15th and 16th Avenues South). Several streets within the 400-foot walking distance to the Park allow on-street parking. These include: 18th Avenue South, Beacon Avenue South, Alamo Place South, Lafayette Avenue South, 17th Avenue South, 16th Avenue South, 15th Avenue South, South Dakota Street, and South Nevada Street.

All roadways within 400 feet of the Jefferson Park site were separated into individual block faces. A block face consists of one side of a street between two cross-streets. For example, the north side of South Dakota Street between 15th and 14th Avenues South is one block face. Each block face was then analyzed to determine the number of available on-street parking spaces. First, all common street features—such as driveways, fire hydrants, and special parking zones—were noted. Second, certain distances adjacent to the common street features were noted. No on-street parking capacity was assumed within 30 feet of a signalized or marked intersection, 20 feet of an uncontrolled intersection, 15 feet on either side of a fire hydrant, 10 feet on either side of a mailbox, or five feet on either side of a driveway or alley. The remaining unobstructed lengths of street, between street features and narrow shoulders, were converted to legal on-street parking spaces using the following chart.



**Table 3-8. Number of Legal On-Street Parking Spaces**

Unobstructed Distance	Number of Parking Spaces	Unobstructed Distance	Number of Parking Spaces	Unobstructed Distance	Number of Parking Spaces
0 – 15 feet	0	206 – 221 feet	11	412 – 433 feet	22
16 – 31 feet	1	222 – 243 feet	12	434 – 449 feet	23
32 – 53 feet	2	244 – 259 feet	13	450 – 471 feet	24
54 – 69 feet	3	260 – 281 feet	14	472 – 487 feet	25
70 – 91 feet	4	282 – 297 feet	15	488 – 509 feet	26
92 – 107 feet	5	298 – 319 feet	16	510 – 525 feet	27
108 – 129 feet	6	320 – 335 feet	17	526 – 547 feet	28
130 – 145 feet	7	336 – 357 feet	18	548 – 563 feet	29
146 – 167 feet	8	358 – 373 feet	19	564 – 585 feet	30
168 – 183 feet	9	374 – 395 feet	20	586 – 601 feet	31
184 – 205 feet	10	396 – 411 feet	21	602 – 623 feet	32

Source: City of Seattle, CAM #117. The numbers of parking spaces for unobstructed lengths over 319 feet were derived by Heffron Transportation using the City's methodology.

Using the methodology described above, a total of 260 on-street parking spaces are available during most hours of each weekday and weekend day (Table 3-8). However, 94 of these potential on-street parking spaces located along 15th Avenue South are subject to peak hour parking restrictions (no parking is allowed between 7:00 and 9:00 A.M. and between 4:00 and 6:00 P.M.). Overall there are very few on-street parking spaces near existing Jefferson Park access points. For example, no on-street parking is allowed along Beacon Avenue South or South Spokane Street.

Existing on-street parking demand was surveyed within the study area for three time periods—weekday afternoons (between 3:00 P.M. and 5:00 P.M.), weekday evenings (between 7:00 P.M. and 8:00 P.M.), and weekend days (between 3:00 P.M. and 4:00 P.M.) during Spring 2002. The weekday afternoon and evening time periods were surveyed to show the existing on-street parking demand during the times when Jefferson Park and the Community Center might be used for recreational activities. These are the times when after-school sports practices and Parks Department sporting events typically occur. In addition, the parking demand was also surveyed on one Saturday and one Sunday afternoon. The weekend time periods were selected to show the existing on-street parking demand during the time when weekend recreation activities typically occur.

The on-street parking surveys were conducted from Thursday, April 4th, 2002 through Sunday April 7, 2002. During all of the survey periods the weather was relatively good (mostly clear with average spring temperatures—50° F). There were recreational activities occurring at the Park including children at the play area, basketball at the community center, tennis, and golf activities. The results of the on-street parking surveys are summarized in Table 3-9.

**Table 3-9. Total On-Street Parking Demand Survey Results**

<b>Time Period Surveyed</b>	<b>Total Number of Vehicles Parked</b>	<b>Average Parked for Time Period</b>
Weekday Afternoons		
Thursday, April 4, 2002	53	59
Friday, April 5, 2002	65	
Weekday Evenings		
Thursday, April 4, 2002	69	74
Friday, April 5, 2002	78	
Weekend Days		
Saturday, April 6, 2002	69	72
Sunday, April 7, 2002	74	

On-street parking utilization was also calculated using the methodology described in CAM #117. Parking utilization is the average number of on-street parked vehicles divided by the number of legal on-street parking spaces within the study area. As described above, 166 on-street parking spaces were assumed to be available on weekday afternoons (3:00 P.M. to 5:00 P.M.), and 260 on-street parking spaces were assumed to be available on weekday evenings, and weekend days (when peak parking restrictions do not reduce supply). The on-street parking utilization within the study area during the analysis time periods is shown in Table 3-10.

**Table 3-10. On-Street Parking Utilization Results**

<b>Time Period</b>	<b>Average Number of Vehicles Parked On-Street</b>	<b>Total On-Street Parking Supply</b>	<b>On-Street Parking Utilization</b>
Weekday Afternoons	59	166	36%
Weekday Evenings	74	260	28%
Weekend Afternoons	72	260	28%

As shown, the highest on-street parking utilization in the vicinity of Jefferson Park occurred on weekday afternoons. However, it should be noted that on-street parking utilization for all analysis time periods was relatively low—36 percent or less. Several block faces near the site had peak utilization rates above 75 percent, including Beacon Avenue South north of South Spokane Street (west side), 17th Avenue South north of South Spokane Street (west side), South Spokane Street east of 16th Avenue South (north side), 16th Avenue South north of South Spokane Street (west side), and 15th Avenue South south of South Spokane Street (west side). A detailed block-face-by-block-face summary of the on-street parking utilization counts is included in Appendix B.

### **Site Access**

Vehicular site access for Jefferson Park exists at several locations. As mentioned in the *Parking* section, there are six entrances/exits for the Beacon right-of-way parking along Beacon Avenue South. Vehicles access the Citywide Horticulture facility and adjacent parking lot via the east leg of the South Dakota Street/16th Avenue South intersection. Vehicles may also access the Citywide Horticulture facility from an internal service drive from Beacon Avenue South.

## Safety

Accident data were obtained from the City of Seattle to determine if there are any traffic safety conditions that could impact or be impacted by the proposed project. Signalized intersections with 10 or more accidents per year and unsignalized intersections with five or more accidents per year are considered high accident locations by the City of Seattle. Three years of the most recent available data were obtained from the City, which includes the period from January 1, 1999 through December 31, 2001. The accident data are summarized in Table 3-11.

**Table 3-11. Intersection Accident Summary (1/1/99 - 12/31/01)**

Intersection	Type of Accident (Totals for Three Years)								Accidents by Year			
	Head-On	Rear-End	Side-Swipe	Right Turn	Left Turn	Right Angle	Peds/Cycle	Other	1999	2000	2001	Total
S Columbian Wy/Beacon Ave S	3	3	2	0	5	2	1	4	5	7	8	20
S Spokane St/Beacon Ave S	0	0	0	0	1	1	3	0	1	2	2	5
S Dakota St/15th Ave S	0	1	0	0	1	0	0	0	0	2	0	2
Roadway Segment	Head-On	Rear-End	Side-Swipe	Right Turn	Left Turn	Right Angle	Peds/Cycle	Other	1999	2000	2001	Total
Beacon Ave S - S Spokane St to Cheasty Blvd S	1	16	1	1	4	2	2	5	7	13	12	32

Source: City of Seattle, 2002a

The two analysis intersections along Beacon Avenue South are signalized. The South Dakota Street intersection with 15th Avenue South is unsignalized. None of the study area intersections met or exceeded the City's high accident threshold during any of the three years evaluated. The South Columbian Way/Beacon Avenue South intersection has three documented head-on collisions and/or angled head-on collisions and five left-turning collisions in three years. This is likely due to the separated travel ways for Beacon Avenue South as it intersects with South Columbian Way. There is a wide median separating the northbound and southbound traffic on Beacon Avenue South. U-turns are allowed at this location and since this intersection is much wider than other intersections in the area, some confusion may result, especially for drivers turning left.

At the South Spokane Street/Beacon Avenue South intersection, three of the five accident occurrences in three years have involved pedestrians and/or cyclists. There is a bicycle lane separating the northbound through-travel lane and the north-to-east right-turn lane at this intersection. There is no information available documenting the severity of the accident occurrences or factors that would contribute to the pedestrian/bicycle accidents listed in Table 3-11; however, all of the intersections have average accident occurrences that are below the acceptable thresholds. Based on the data provided by the City, except for the three pedestrian/bicycle accidents at the South Spokane Street/Beacon Avenue South intersection, there does not appear to be any other unusual safety conditions in the study area.

At present, there is no traffic signal at 15th Avenue South and South Dakota Street to allow controlled access into and out of the Park on the west side. There is also no safe and dedicated

pedestrian crossing at this location. Pedestrians must go to 15th Avenue South and South Spokane Street or 15th Avenue South/South Columbian Way and South Oregon Street to safely cross 15th Avenue South with the aid of crosswalks and pedestrian signals to access Jefferson Park from the west.

### **Transit Facilities and Service**

King County/Metro provides bus transit service to the study area. The site is directly served by public transit with Metro transit stops located on Beacon Avenue South and South Columbian Way in the vicinity of the project site. Metro Transit Route 36 serves Beacon Avenue South, and Routes 39 and 60 serve South Columbian Way. The bus stop on Beacon Avenue South just east of the Veterans Affairs Medical Center has a large paved loading/waiting area and a bus shelter for riders using southbound buses.

Metro Transit Route 36 extends from downtown Seattle to Rainier Beach and is a full service route, which operates seven days a week. During the weekdays this route operates with approximately 10-minute headways (the time between consecutive bus arrivals) in both directions from about 5:00 A.M. to 2:00 P.M. Metro Route 39 serves Downtown Seattle to Rainier Beach as well as Southcenter. This is also a full service route, which runs seven days a week. Within the study area, this route operates with approximately 30-minute headways in both directions during the weekday from about 5:30 A.M. to 10:00 P.M. Metro Transit Route 60 extends from the Broadway area of Seattle to the Georgetown and Boeing Industrial areas of Seattle. In the vicinity of the project site, this full service route operates with approximately 30-minute headways in both directions during the weekday from 6:00 A.M. to 10:00 P.M.

The King County Metro Six-Year Transit Development Plan (updated February 2002) indicates that the Metro Transit Route 39 in the vicinity of the project site would no longer extend to Southcenter and would terminate at Rainier Beach. Metro Transit Route 60 is planned to have extended weekend service to White Center along with expanded weekend hours to 9:00 P.M. No changes are identified for Metro Transit Route 36.

The study area is located just over one-half mile south of the planned Sound Transit Central Link Light Rail line and Beacon Hill station. The light rail line will provide a new high capacity transit network connecting Downtown Seattle, Tukwila, and SeaTac. The proposed Beacon Hill Station is anticipated to have the highest ridership south of downtown Seattle with improved transit facilities to the Beacon Hill area. The tunnel station would be located about 150 feet under South Lander Street, with an entrance located at the southeast corner of the South Lander Street/Beacon Avenue South intersection. The Beacon Hill Station is currently in the engineering and design phase and is currently scheduled to be complete and operating by 2009.

### **Non-Motorized Transportation Facilities**

As described in the *Roadway Network* section, most roadways surrounding the site have sidewalks. However, some sections of roadway have gravel paths and no sidewalk. There is a gravel path along the south side of South Spokane Street between 15th Avenue South and Beacon Avenue South along the north Jefferson Park frontage. There is also a gravel path along the east side of Beacon Avenue South for much of the golf course frontage between South Spokane Street and

Cheasty Boulevard South. There is no sidewalk along either side of 16th Avenue South between approximately South Nevada Street and South Dakota Street. There is sidewalk along the Mercer Middle School frontage of 16th Avenue South south of South Nevada Street. In addition, the signalized study-area intersections have pedestrian signals. There are three marked and signed crosswalks of Beacon Avenue South. Each of the crosswalks has flashing yellow overhead lights and textured pavement. They provide pedestrians a means to cross Beacon Avenue South to access northbound bus routes and/or the gravel path on the east side of the roadway.

## Impacts

### **Alternative A—Interim Plan**

#### **Construction**

The construction-related traffic impacts of the proposed action would vary throughout the construction process. Most construction activity and related impacts would occur within the project site boundaries. However, some activities would require use of the local roadways and intersections surrounding the site. The project will require a total of approximately 370,000 cubic yards of fill for various elements of the project. Some or all of this fill could come from material generated as part of Sound Transit's Beacon Hill Station and Tunnel for the LINK Light Rail project.

Approximately 300,000 cubic yards of material is projected to be made available to the region from excavation of this segment of the Light Rail project (Sound Transit, 1999). Availability to use some of this material for Jefferson Park site plan improvements would depend on timing and quality of the fill material. Other sources of fill material may be required.

The largest activity would be construction of the large, grassy, open space or meadow (Great Meadow) at the former location of the North Reservoir intended as a multi-use open lawn area. This element would require a net import of nearly 280,000 cubic yards (cy) of fill. Importing the required amount of fill is expected to occur from 2003 through 2005. Assuming the fill is transported in trucks carrying 20 cubic yards each, and that the fill transport occurs over 24 months (approximately 500 working days) the effort would require an average of approximately 30 truckloads per day. Each truckload would generate two trips (one inbound and one outbound) and would most likely occur during midday hours (9:00 A.M. through 4:00 P.M.). Most construction transportation begins before the A.M. peak hours and is stopped by 4:00 P.M. to avoid unnecessary delay to truck drivers. Assuming transportation occurs over six hours each workday, the fill effort would generate an average of five truckloads per hour—10 truck trips per hour. If the construction time period is longer than six hours, then the number of truckloads per hour would decrease. In addition to the Great Meadow, other elements of the project would require a net increase in on-site material. An estimated 90,000 cubic yards of fill are expected to be required for elements including the paths and service drives, the Community Center and gymnasium, the Terrace, and entry improvements. Some fill activities could occur concurrently with the activity at the Great Meadow. Depending on the construction schedules for each of the other elements, an additional 10 to 18 truckloads per day could occur over short periods. Over the course of a typical workday, this would result in two to three truckloads per hour—four to six truck trips per hour.



In total, the import of fill material to the site is expected to generate 14 to 16 truck trips per hour during midday hours of the construction period. The construction of the project would also require employees and equipment that would generate traffic to and from the site. It is anticipated that construction workers would arrive at the construction site before the A.M. peak traffic period on local area streets and depart the site prior to the P.M. peak period; construction work shifts typically begin by 7:00 A.M. and end by 4:00 P.M., while the corresponding peak traffic periods typically occur in the following hours. The number of workers at the project site at any one time would vary depending upon the nature and construction phase of the project.

Based on these estimates, the proposed project would likely generate a noticeable amount of construction traffic on surrounding roadways. Trucks delivering fill to the site would be most noticeable and would likely use Beacon Avenue South (if fill from the Sound Transit LINK Beacon Tunnel project is used ) or South Spokane Street for fill from other areas. Although the truck traffic would be noticeable, the increase would represent approximately 1 percent of overall midday traffic and approximately 22 percent of midday truck traffic already on the local roadway network. The truck traffic is not expected to degrade operations of study area intersections during off-peak hours and impacts during peak hours are expected to be minimal. However, the truck activity could disrupt operations at one or more of the existing site access driveways. Since several other driveways exist, this disruption is not anticipated to be significant.

The presence of a temporary construction work force would also increase the demand for on-site parking. It is anticipated that temporary parking lots would be established near key locations of construction activity to address this demand; combined with the existing on-site parking supply, which is typically underutilized on average weekdays, there should be adequate on-site parking supply to accommodate the temporary increase in demand.

### Operation

#### **Site Description**

As described previously in this document, the project proposes the following improvements:

- Decommissioning and filling the existing North Reservoir. In place of the reservoir, the project would install a large, grassy, open space or meadow (Great Meadow), intended as a multi-use open lawn area, which could accommodate a variety of park uses such as picnicking, community events, youth soccer, other field sports and other recreational activities.
- Construction of the Jefferson Community Center Activities Building.
- Construction of a new gymnasium.
- Construction of on-site parking for approximately 28 vehicles to the south of the new gymnasium buildings.
- Installation of a new traffic signal at the South Dakota Street/15th Avenue South intersection.
- Construction of on-site parking for approximately 30 vehicles to the north of South Dakota Street.
- Replacement of the children's play area with a new one in a different location.

- Construction of four outdoor tennis courts—a net increase of two compared to existing conditions, two basketball courts—an increase of 1½ courts compared to existing conditions), and a new bocce ball court or similar sports court.
- Construction of a skateboard area.
- Renovation of Jefferson Field and installation of accessory improvements. Improvements would include renovation of fields to accommodate Samoan cricket and soccer. The field improvements would include field lighting, synthetic turf, restroom facilities, picnic facilities, and parking between the field and 16th Avenue South for approximately 40 vehicles.
- Installation of ponds, a stream, and viewpoints.
- Construction of new or enhanced entrances, concession stands, toilets, walkways, jogging paths and other landscape features.

## Roadway Network

The Jefferson Park proposal would make some changes to the study area roadway network. The project would install a traffic signal at the South Dakota Street/15th Avenue South intersection if and when it meets the minimum traffic and/or pedestrian volume thresholds to warrant a traffic signal. When installed, the traffic signal would include pedestrian signals and crosswalk improvements, and could include traffic calming elements. The operational impacts of this element, together with the anticipated new traffic from the project, are evaluated in the following sections.

Another project element that would affect the local roadway network includes crosswalk improvements at the South Spokane Street/Beacon Avenue South intersection. These improvements may include textured pavements to better identify crosswalk areas and act as traffic calming devices. The project would also include a variety of frontage improvements including new boulevard tree planting along Beacon Avenue South, meandering pedestrian walkways along South Spokane Street, 15th Avenue South, and a walkway along the east side of 16th Avenue South.

## Traffic Volumes

As described previously, Jefferson Park is actively used for recreation. The proposed improvements would increase the space available for a variety of activities and would provide new facilities that would attract new users. Other amenities such as lighting would extend activities into the evening hours. To evaluate the potential transportation impacts of the proposed project, the net increase in activity and the traffic associated with each element of the Park's rehabilitation were estimated. Typically, rates and equations from *Trip Generation* (Institute of Transportation Engineers, 6th Edition, 1997) are used to estimate new traffic generated by development projects. However, there is very little data available in *Trip Generation* for the new uses proposed at Jefferson Park. Therefore, trips for each element were estimated separately based on information from *Trip Generation* (where available), and from other sources such as previous analyses of planned athletic facilities and other park improvements. Each element and the source or assumptions used to estimate the net increase in average daily and peak hour trip generation for both weekdays and Saturdays are described below.

- **Great Meadow & General Park Space** – This space would be entirely new and would include space for passive recreation activities, unprogrammed open space for sports, picnics, and trails. The new space is estimated to include approximately 14 acres. Trip generation for this element was estimated using data in *Trip Generation* for small city park (Land Use Code 411).
- **Community Center Activities Building** – This element would continue to host a variety of recreational programs for preschoolers, youth, adults and seniors; arts and dance classes, a variety of health and fitness classes; before and after school programs for Beacon Hill and Kimball elementary schools and summer day camp programs for young people aged 5-14. Trip generation for this element was estimated using rates for a community center (Land Use Code 495) in *Trip Generation*. The new Activities Building would consist of approximately 14,000 square feet of activity spaces.
- **New Community Center Gymnasium** – A new gymnasium is proposed with approximately 7,200 square feet of active use space (approximately 10,000 square feet total). The gym would be used for informal games, classes, occasional spectator games, and infrequent assembly use. The trip generation for this building was estimated based on information from Parks related to anticipated use and activities.
- **Children’s Play Area** – The proposal would create a larger play area with more “play value” than the existing facility. Traffic estimates were developed based on observations at the existing facility and information from Parks related to current and anticipated usage levels.
- **Tennis Courts** – The project would eliminate two existing tennis courts and construct four new tennis courts on the site—for a net increase of two courts. The new courts are also anticipated to be lighted for evening play. Traffic estimates for the additional activity at the courts were developed from rates for tennis courts (Land Use Code 491) in *Trip Generation*.
- **Basketball Courts** – The proposal would construct two new full-size basketball courts on the site—replacing the half court that exists at the site today. Traffic estimates for this element were developed based on observations at the existing facility and estimates of anticipated average activity at the new courts.
- **Bocce Ball/Other Sport Court** – The proposal would add a new bocce ball or other sport court on the site. Traffic estimates for this element were developed based on estimates of potential average usage.
- **Jefferson Field** – The existing Jefferson Field would be renovated for Samoan cricket, soccer, and other field sports. The existing softball and baseball fields would be eliminated and these sports would no longer be played at this site. As described in the affected environment section, the existing fields are currently used for these activities (from mid-April to the end of August, Monday through Friday, until dark, and Saturdays for 12 hours per day), plus baseball and softball. Youth soccer is played in fall—usually by dividing the field into two smaller fields for games and practices. The improvements would increase the attractiveness of the fields and may result in more frequent usage for those activities that would remain at the site. In addition, proposed lighting would allow the fields to be used in the evenings until 10:00 or 11:00 P.M. The net increase in traffic for this element was based on potential for additional games on each field made possible by lighting and on observations at other similar facilities.

- **Skateboard Facility** – The project may include a facility for skateboards. Traffic estimates were made for this element.

Table 3-12 summarizes estimates of the project-related net increase in average weekday and Saturday traffic at Jefferson Park. As shown, the project is expected to result in 1,680 new vehicle trips (840 in, 840 out) on an average weekday. Of those, 136 trips (~~31~~ 61 in, 75 out) are expected to occur during the P.M. peak hour of the adjacent street system. On an average Saturday, the project is expected to generate an average of 2,450 new vehicle trips (1,225 in, 1,225 out). Of those, 222 trips (107 in, 115 out) are expected to occur during the peak hour of the adjacent street system.

**Table 3-12. Trip Generation Estimates – Net Increase (Average Weekday & Saturday)**

Project Element	Net Increase in Average Trip Generation							
	Weekday				Saturday			
	Daily Trips	PM Peak Hours			Daily Trips	Peak Hours		
		In	Out	Total		In	Out	Total
Open Meadow & General Park Space	300	11	18	29	600	19	30	49
Community Center	380	3	7	10	50	3	4	7
Gymnasium	420	12	24	36	830	12	24	36
Children's Play Area	80	2	2	4	240	6	6	12
Tennis Courts	60	5	3	8	80	7	3	10
Basketball Courts	140	5	1	6	180	5	1	6
Bocce Ball/Other Sport Court	10	2	1	3	20	2	1	3
Jefferson Field	220	11	14	25	320	33	36	69
Skate Board Facilities	70	10	5	15	130	20	10	30
<b>Total</b>	<b>1,680</b>	<b>61</b>	<b>75</b>	<b>136</b>	<b>2,450</b>	<b>107</b>	<b>115</b>	<b>222</b>

The trip distribution pattern for Jefferson Park was derived using population data for the areas within approximately three miles of Jefferson Park. The area within three miles of the Park includes: parts of West Seattle to the west, Downtown Seattle, First Hill and to the north Madrona, areas east to Lake Washington, and areas south to Rainier Beach and Boeing Field. Existing population data (number of occupied housing units) for census tracts were obtained from the Puget Sound Regional Council (2000 Census). The population in each census tract was weighted according to the distance from the site. For example, full weight (100 percent) was assigned to residents within one mile of the Park. The weighting decreased to 75 percent for areas between one and two miles from the site; and to 50 percent for areas between two and three miles from the site. Weightings of 10 percent or 20 percent were applied to areas very near the Park since those residents would be more apt to walk or bike to the site. The weighted populations for each area were then totaled, and the percentage attributable to each was determined. The population data were then plotted on a map, and used to determine the percentage of trips that would use various roadways when traveling to or from the proposed project. The resulting trip distribution pattern is shown on Figure 3-9. It is recognized that some park users would come from a distance greater than three miles (e.g., soccer teams). This would not affect the trip distribution pattern on local study area roadways.

The net increase in average weekday daily and P.M. peak hour trips were assigned to the roadway network according to the trip distribution pattern described previously. The net change in trips associated with the proposed project is shown on Figure 3-9. Based on the project trip assignment, three intersections were selected for analysis: South Columbian Way/Beacon Avenue South, South Spokane Street/Beacon Avenue South, and South Dakota Street/15th Avenue South. The project trips were added to the 2010-without-project traffic volumes. The resulting 2010-with-project traffic volumes are shown on Figure 3-10. These volumes were used to evaluate with-project traffic operations.

### Traffic Operations

Levels of service were determined for the study area intersections using the forecast 2010-with-project traffic. Table 3-13 shows the results of the analysis; levels of service for without-project conditions are included for comparison. As shown, the project would add small amounts of delay to the two signalized study-area intersections. Both intersections would continue to operate at LOS D or better within the City of Seattle LOS threshold.

As described previously, the project proposes to signalize the South Dakota Street/15th Avenue South intersection. Without a signal the eastbound and westbound movements would operate at LOS F. With a traffic signal, all movements at the intersections would operate at LOS A. As shown, the proposed project, with the planned signal, would substantially improve operations for turns from South Dakota Street.

**Table 3-13. Level of Service Summary – 2010 Without-Project (No Action) and With-Project Conditions**

Signalized Intersections	Forecast 2010 Without-Project (No Action)			Forecast 2010 With-Project		
Signalized Intersections	LOS <sup>1</sup>	Delay <sup>2</sup>	v/c <sup>3</sup>	LOS	Delay	V/C
S Spokane Street/Beacon Avenue S	C	29.6	0.71	C	29.7	0.72
S Columbian Way/Beacon Aveue S	D	46.4	0.83	D	52.0	0.88
S Dakota Street/15th Avenue S <sup>4</sup>	N/A (see unsignalized below)			A	2.4	0.55
Unsignalized Intersections	LOS	Delay		LOS	Delay	
S Dakota Street/15th Avenue S <sup>4</sup>						
Northbound left from 15th Ave S	A	0.5		A	0.5	
Southbound left from 15th Ave S	A	1.1		A	1.5	
Eastbound turns from Dakota St	F	237.6		F	311.8	
Westbound turns from Dakota St	F	63.4		F	162.0	

Source: Heffron Transportation, Inc., 2002

1. LOS = Level of Service
2. Delay = Average delay per vehicle in seconds
3. v/c = Volume-to-capacity ratio
4. Project proposes to signalize this intersection; LOS results shown for both signalized and unsignalized conditions with the project.

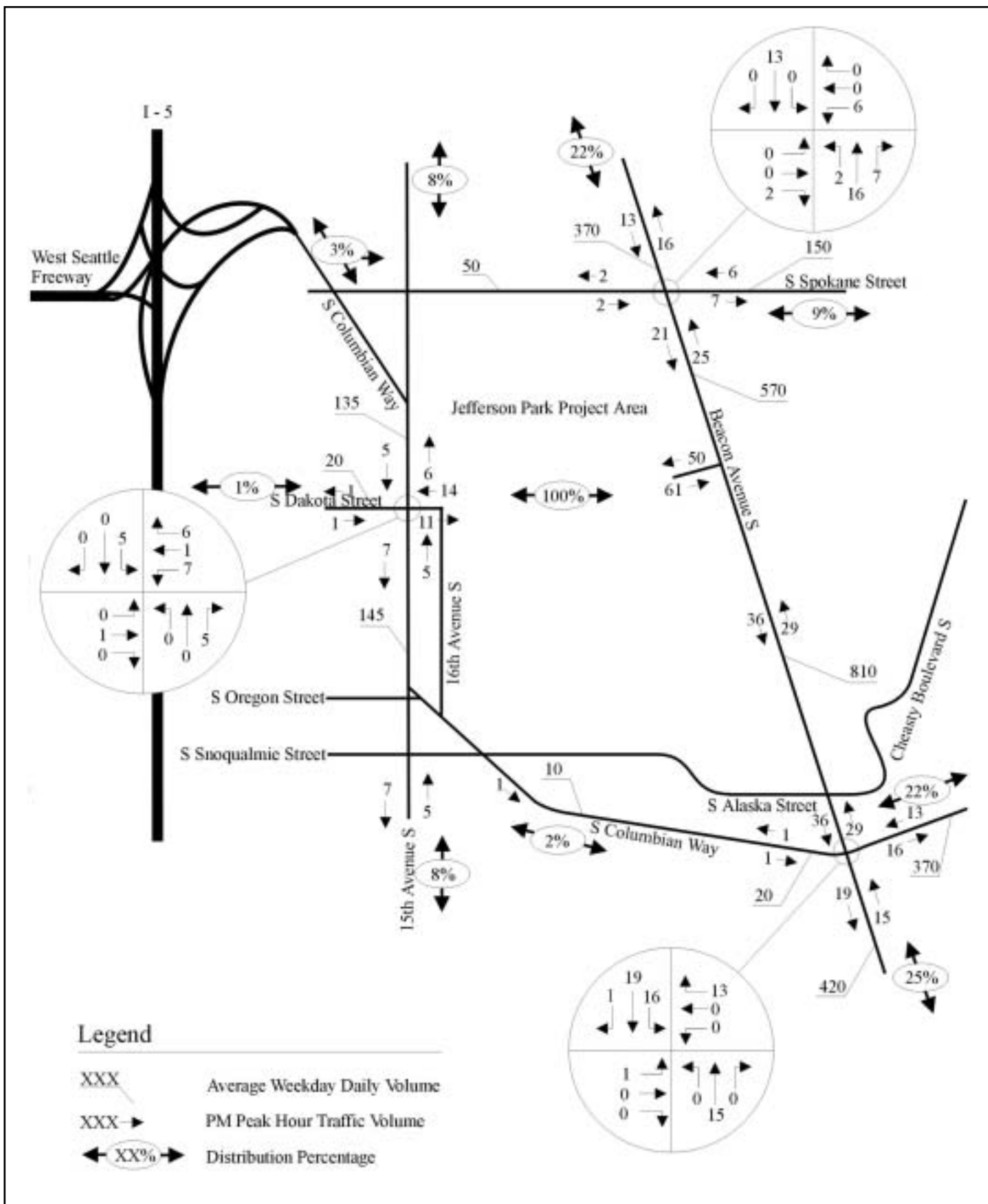


## Parking

The project would construct new parking facilities in three locations on the Jefferson Park site. Approximately 28 spaces would be constructed adjacent to the proposed gymnasium and existing Community Center to the south. Approximately 40 spaces would be constructed adjacent to Jefferson Field. Approximately 30 spaces would be added for public use northwest of the Citywide Horticulture facility. Approximately 24 new parking spaces would be constructed south of the lawn bowling greens. The project would also eliminate approximately 15 parking spaces due to construction of new facilities and would result in a net increase of 107 parking spaces on the site.

Overall parking demand at or near Jefferson Park is expected to increase because of new attractions proposed by the project, and because of increased use of existing facilities due to improvements such as field lighting. Typically rates and equations from *Parking Generation* (ITE, 2nd Edition, 1987) are used to estimate increases in parking demand for new developments. However, there are no data in *Parking Generation* applicable to the proposed uses. Therefore, the potential net increase in parking demand was estimated based on parking data from studies of other recreational facilities and information about the planned uses provided by the Parks Department. The following summarizes estimates of parking demand increases for each element of the project.

- **Great Meadow & General Park Space** – on average, 20 to 30 people may use this space at one time. Since people would be expected to arrive at the Park in groups of two, three, or more, the associated parking demand is estimated to average 10 to 15 vehicles. Peak demand for this space would likely occur on Saturdays during the summer. Demand at this time could be much higher depending on the types of activities occurring at the Park and the weather.
- **Community Center Activities Building** – The new Community Center Activities Building is expected to attract an additional 20 persons per hour. This could translate to increases in average parking demand of 10 to 15 vehicles. Peak parking demand for the Activities Building would likely occur when events are held in one or more of the meeting rooms. Meetings now occur at the existing facility and could happen more frequently but would still only be expected a few times per month. Meetings are estimated to result in 50 to 75 persons on site in one large meeting or in a few small meetings.
- **Community Center Gymnasium** – Since there is no gymnasium on the site currently, all associated activities would create new parking demand. Average normal use of the gym would be games and classes for between 20 and 40 people. This level of activity would result in new parking demand of approximately 15 to 30 parking spaces. Infrequent spectator events attracting between 95 and 155 persons could occur a few times per month. These types of activities would generate parking demand of 50 to 80 parking spaces assuming an average of two persons on site per parked vehicle. The most intense use could occur a few times per year and could attract as many as 480 persons. This peak event would result in parking demand of approximately 160 spaces, assuming three persons per parked vehicle.
- **Children's Play Area** – The play area is expected to attract new users and some increase in parking demand would be expected. An increase in parking demand of between two and five spaces is expected.
- **Tennis Courts** – On average the tennis courts might increase parking demand by two vehicles. During good weather, peak use could increase parking demand by four to six vehicles.



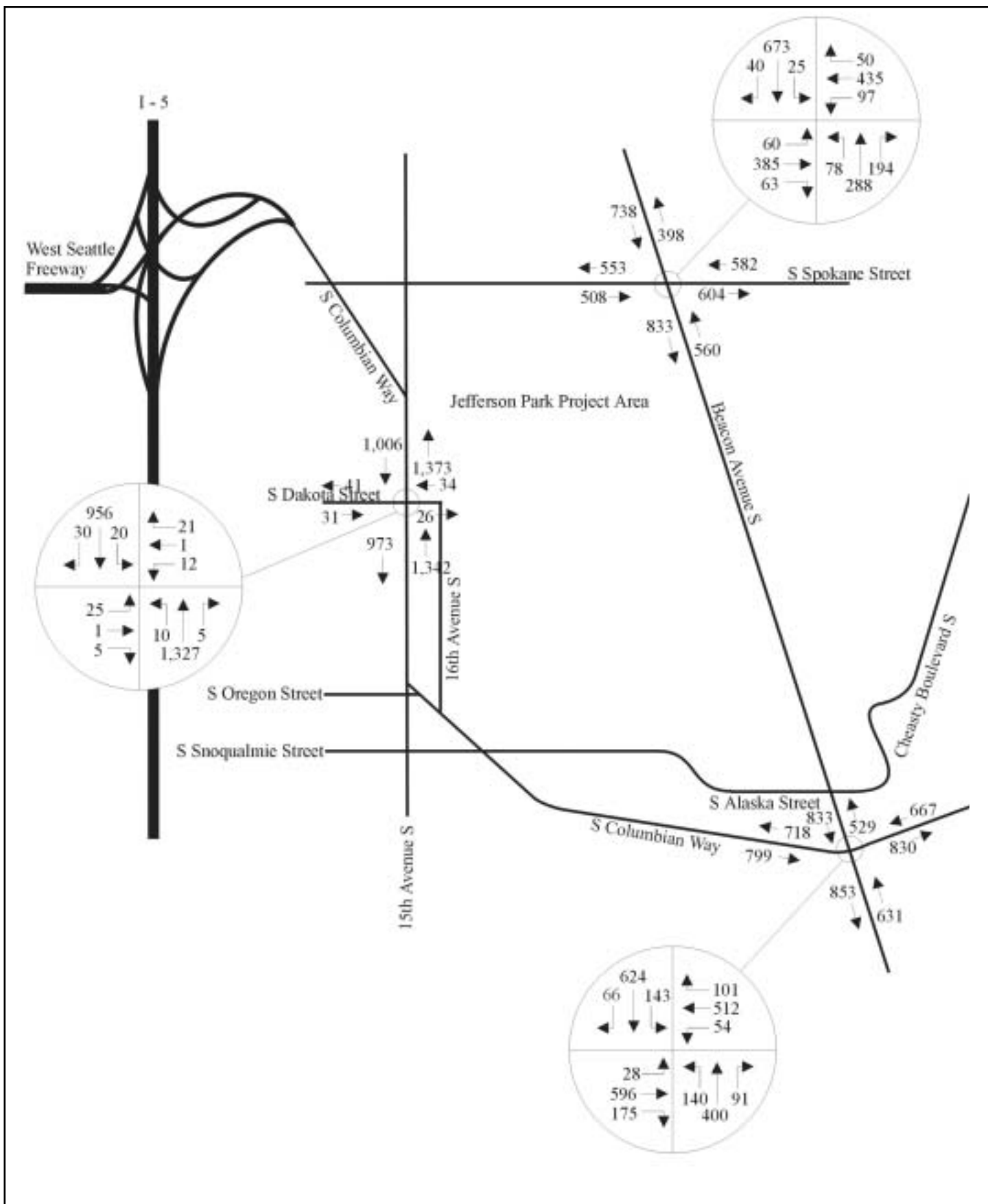
**FIGURE 3-9.**  
**NET NEW PROJECT TRIP DISTRIBUTION & ASSIGNMENT**  
**AVERAGE WEEKDAY DAILY & PM PEAK HOUR**  
**JEFFERSON PARK SITE PLAN EIS**  
**SEATTLE, WASHINGTON**



**↑**  
**NORTH**  
**No Scale**

File name: 22010distribution.ai  
 Original graphic by: ACT  
 Edits by:  
 Date: 5/1/02

Source: Heffron Transportation, Inc.



**FIGURE 3-10.**  
**FORECAST 2010 WITH-PROJECT**  
**PM PEAK HOUR TRAFFIC VOLUMES**  
**JEFFERSON PARK SITE PLAN EIS**  
**SEATTLE, WASHINGTON**



NORTH  
No Scale

File name: 22010forecast2.ai  
 Original graphic by: ACT  
 Edits by:  
 Date: 5/1/02

Source: Heffron Transportation, Inc.

- **Basketball Courts** – On average the basketball courts might increase parking demand by four vehicles. During good weather, peak use could increase parking demand by six to eight vehicles.
- **Bocce Ball/Other Sport Court** – These new courts are expected to increase average parking demand by two to three vehicles. During good weather, peak use could increase parking demand by four to six.
- **Jefferson Field** – The largest likely generator of parking demand would be Samoan cricket games on weekends. Other uses such as soccer would also generate regular parking demand near the site. Based on data collected throughout Seattle for soccer field facilities, each field is estimated to generate an average parking demand of 30 vehicles. During evening hours, this demand would be new. Other activities such as Samoan Cricket might attract 30 to 40 participants as well as numerous spectators and could result in much higher peak parking demand. However, this activity is currently occurring at the site and would not be a direct result of the proposed project.
- **Skateboard Facility** – Some users of this facility are expected to drive to the site. The increase in average parking demand due to this element is estimated at two to three vehicles.
- **Picnic Shelters** – Three shelters are proposed and are expected to generate some level of parking demand, especially on nice summer weekends.

Based on the above assumptions and expectations, the proposed improvements at Jefferson Park could increase total average parking demand by approximately 85 vehicles in the parking area near Beacon Avenue. However, the peak parking demand associated with each use on the eastern side of Jefferson Park may not coincide. For example, peak use of the children's play area, Great Meadow, outdoor basketball court, and skateboard facility are expected to occur midday, while peak demand for the lighted playfields, the gymnasium, and new Community Center Building are expected to occur in the evenings.

On the west side of the Park, the improvements planned for Jefferson Field might increase average parking demand by approximately 30 vehicles. This increase in demand would likely utilize new spaces planned along 16th Avenue South. During larger events at the fields, parking may extend north along 16th Avenue South on shoulders or in parking lots on the Mercer Middle School site. To mitigate potential parking overflows in this area, the Parks Department should work with the Seattle School District and Veterans Affairs Medical Center to share parking facilities and ensure that, whenever possible, parking facilities are open and well signed for users.

The additional parking proposed by the project would accommodate a portion of the increased demand expected. The existing on-site parking lots are well utilized but, on average days, have some excess capacity to accommodate increased demand. During average days, the existing and proposed parking supply is expected to accommodate the demand.

During peak recreation times (spring and summer months) demand for uses at Jefferson Park could be much higher. Parking demand during peak times could exceed the on-site supply provided along Beacon Avenue and near Jefferson Field. During these peak times, Park users may choose to park on-street in areas north of South Spokane Street, along 16th Avenue South adjacent to Mercer Middle School, or along roadways west of 15th Avenue South. New pedestrian facilities such as

the South Spokane Street overpass and the signal planned at South Dakota Street would facilitate use of these on-street spaces. Based on the on-street parking utilization data (less than 36 percent utilized) for on-street spaces within 400 feet of the Park, there is excess parking capacity to accommodate such occasional demand.

To maximize use of Beacon right-of-way parking and on-site parking, and minimize impacts to off-site parking facilities, additional signage directing users to various Jefferson Park parking locations should be installed at major access decision points. The Parks Department should explore potential for adding parking spaces adjacent to the Citywide Horticulture facility to serve new demand in the northwest portion of the project area. ~~The Park As described further in this section, these intersections were selected based on the distribution and assignment of new trips to the study area. These are the intersections that would experience the largest increases in new project-related traffic or would be most affected by the improvements planned for the project area.~~

~~The study area intersections and the associated roadways are described below:~~

~~**Beacon Avenue South** is an arterial that provides access from northwest Beacon Hill at Holgate Street to south Seattle near Boeing Field. It represents the east boundary of the project site. Along the site frontage, Beacon Avenue South is a three-lane roadway—one lane in each direction plus a center left turn lane. The posted speed limit is 30 mph. The largest portion of the Jefferson Park Golf Course is located opposite the project site on the east side of Beacon Avenue South. On the east side, there is no sidewalk but there is a gravel walking path alongside the chain link fence separating the golf course from the Beacon Avenue South right-of-way. The Parks Department should explore potential for adding parking spaces adjacent to the Citywide Horticulture facility to serve new demand in the northwest portion of the project area.~~

Parking demand at the Park and for the proposed new facilities may be best controlled through careful management of scheduling. Staggering start times of activities at athletic fields, at the Community Center Activities Building, the gymnasium, and other facilities can be very effective in managing the parking demand to match the parking supply available. Staggered start times reduces the likelihood that participants from two consecutive activities are parked at the site at the same time. This is typically when peak parking demand and overflow to adjacent facilities occurs. Coordination and scheduling of activities should also consider events at Mercer Middle School and peak demand at the Veterans Affairs Medical Center. As mentioned above, shared parking agreements with Mercer Middle School and the Veterans Affairs Medical Center would also help to limit parking overflow impacts to adjacent areas.

### Site Access

Site access conditions were evaluated for potential peak event conditions at the new Community Center Activities Building. This analysis assumed that the 75 percent of the two northernmost Beacon right-of-way parking areas (comprising approximately 117 existing spaces plus 28 new spaces proposed with the project) would empty and 25 percent would fill during one peak hour overlapping the P.M. peak hour of adjacent street traffic. It was also assumed that all these spaces would be accessed using one of the entrances to the Beacon right-of-way parking area. This situation simulates a worst-case condition with an attendance event or events at the Community Center Activities Building or the gymnasiums. Since the parking lots have six access driveways,

this scenario is unlikely. Finally, the analysis period was assumed to occur in less than one hour (similar to event ingress/egress conditions). This scenario is anticipated to occur very few times per year. Based on the conservative worst-case event condition assumptions outlined above, the movements from the site access intersections are anticipated to operate at LOS D or better. During all other times, all site access intersections are anticipated to operate better.

The signal proposed by the project at the South Dakota Street/15th Avenue South intersection would improve access for uses located on the west side of Jefferson Park. Users parking in the new spaces planned near the horticulture facility or near the improved Jefferson Field can use the new signalized intersection to make turns onto 15th Avenue South. With the project and signal, turns from South Dakota Street would be improved from LOS F to LOS A.

Pedestrian and non-motorized access to and from the Park area is summarized in the subsequent *Non-Motorized Transportation Facilities* section.

### Safety

The project would increase traffic volumes on surrounding roadways and at site access driveways along Beacon Avenue South. New facilities will also attract more users walking and cycling to the site. The increase in automobile, pedestrian, and bicycle traffic all could result in a commensurate increase in accident potential. However, the increase during peak hours is expected to be 2 percent or less at the intersections nearest the project and is not expected to result in significant adverse impacts to safety conditions.

In addition, the project is proposing a number of improvements that would enhance transportation safety conditions in the study area. The traffic calming pavement treatments and crosswalk enhancements would assist in slowing traffic and improving safety conditions in the Beacon Avenue South corridor. The proposed pedestrian overpass would provide a grade-separated crossing of South Spokane Street for pedestrians and cyclists to avoid crossing at-grade. This would improve pedestrian and vehicular safety in the site vicinity. If a traffic signal is installed (when warranted) at the South Dakota Street/15th Avenue South intersection together with other intersection improvements such as pedestrian signals and crosswalk enhancements, safety would also be improved at this location.

### Transit Facilities and Service

The improvements planned for Jefferson Park may generate new trips to the site using Metro Transit routes in the site vicinity. However, the increase in potential riders is expected to be relatively small and would be accommodated by the existing transit service.

### Non-Motorized Transportation Facilities

The proposed Jefferson Park renovation project would include numerous improvements to pedestrian and bicycle facilities located on-site as well as off-site. The project would construct a new pedestrian overpass across South Spokane Street between 16th and 17th Avenues South. This overpass would improve safety and overall access for pedestrians and cyclists.



The project would include walkway improvements throughout Jefferson Park as part of the trails system as well as formal walkways along Beacon Avenue South, South Spokane Street, 15th Avenue South, and 16th Avenue South. Finally, the project includes several pedestrian crossing improvements including pavement treatments to calm traffic and identify pedestrian areas to drivers. Overall access for pedestrian and bicycle modes would be enhanced by the proposed project.

### **Alternative B—Long-range Plan**

This alternative would include all of the elements described for the Action Alternative A – Interim Plan plus elements associated with reconstruction of SPU’s South Reservoir, a second new Community Center Gymnasium, and a new pedestrian overpass from the north end of Jefferson Park over South Spokane Street between 16th and 17th Avenues South. The following presents programmatic level analysis for the second new gymnasium building, the new pedestrian overpass, and improvements that could occur with reconstruction of the South Reservoir. If this element receives funding and is constructed at some time in the future, additional project level environmental review and transportation analysis would be performed.

#### **Construction**

Construction of the Sports Plateau and picnic grounds elements of this alternative would require reconstruction of the South Reservoir. This reconstruction is expected to require a net import of approximately 56,000 cubic yards of fill. The import of fill would require approximately 2,800 truckloads. If the fill import occurred over six months, it would result in 22 truck trips per day and approximately four truckloads per hour during midday construction periods. This activity is not anticipated to coincide with construction activity identified for the Action Alternatives evaluated previously. Further analysis of construction impacts would be conducted once construction schedules and fill sources are identified.

#### **Operation**

The Sports Plateau would include a new baseball field, a new football/soccer field, and a 400-meter running track. These fields could be lighted and attract youth and adult athletic activities on weekdays and weekends.

The proposed configuration of the fields would allow for two concurrent activities plus use of the track. Lighting the field would allow for two or three games on each field between 5:00 and 11:00 P.M. Based on observations of adult and youth athletics, each additional game is estimated to generate approximately 60 vehicle trips (30 inbound and 30 outbound). This estimate assumes most adults drive to these activities in separate vehicles, which is typical for adult recreational soccer and is likely conservatively high for most youth sports activities. On an average day, the project could result in approximately 360 new trips (180 inbound, 180 outbound). The most in any one hour (180 total with 90 inbound, and 90 outbound) would likely occur between approximately 8:00 and 9:00 P.M. between games. This estimate is based on a total of six additional adult or youth activities such as soccer matches each night (two games on each field three times per night between 5:00 and 11:00 P.M.). All of the new trips would primarily occur outside of the peak hours for adjacent roadways.

A new gymnasium is proposed that would contain approximately 7,200 square feet of active use space. The gym would be used for informal games, classes, occasional spectator games, and infrequent assembly use. The trip generation for this building would be similar to that described for the gymnasium building proposed in Alternative A.

The picnic grounds could also attract new users with largest activity anticipated on weekend days with good weather.

The operation of these facilities would also generate new parking demand. For adult and youth activities, the peak parking demand occurs when one event is nearly complete and participants begin arriving for the next event. For example, adult soccer league games typically have between 23 and 30 participants. Nearly all drive alone in automobiles. At the Jefferson Park Sports Plateau, two games could be scheduled concurrently. If the start times are not staggered, the peak parking demand for these activities could include participants for as many as four games and may range between 90 and 120 vehicles (two fields with participants for four games—one ending, one beginning). During project level review of this element, on-site parking demand would be reviewed to determine if the existing parking supply could accommodate the additional parking demand.

### **Alternative C—No Action**

#### **Construction**

The No Action Alternative would have no construction impacts.

#### **Operation**

The No Action Alternative was evaluated as future-conditions-without-the-project and presented in the Affected Environment section. If the No Action Alternative is selected, the project site would continue to operate and attract users much as it does today. No net increase in traffic or parking demand would be expected with this alternative. In addition, this alternative would not include the traffic, non-motorized access, safety, and parking improvements included as part of the proposal alternative.

### **Cumulative Impacts**

The transportation analysis prepared for this EIS included anticipated background traffic growth as well as specific traffic estimates for known development projects that would add traffic to the local roadway network. Therefore, the impact analysis for the action alternative includes the cumulative impacts of increases in traffic in the surrounding community.

### **Mitigation Measures**

#### **Alternatives A and B – Construction Impacts**

- To minimize construction impacts to local roadways and adjacent land uses, a construction management plan (CMP) addressing traffic and pedestrian control should be prepared to address truck routes. Although none are anticipated at this time, this CMP would address lane closures,

sidewalk closures, and bus stop relocations, if any are required. Prior to the start of construction of major elements for this project, the CMP would be updated to current conditions. To the extent possible, the CMP should direct trucks away from Mercer Middle School to avoid unnecessary conflicts with buses and student pedestrian activity. The Parks Department should coordinate these routes with the Seattle School District and Mercer Middle School representatives.

- ~~Parks should Explore~~ ~~explore the opportunity~~ ~~opportunities~~ to coordinate transport of fill material for Park improvements with Sound Transit's excavation of material from the Beacon Hill Station and Tunnel to reduce the volume of trucks on area roadways.

### **Alternatives A and B – Operation Impacts**

For project operations, several mitigation measures for traffic, non-motorized access, safety, and parking have been incorporated into the proposal. These include the following:

- A new traffic signal and possible pedestrian improvements such as crosswalks, pedestrian signals, and textured pavement for traffic calming at the South Dakota Street/15th Avenue South intersection.
- A pedestrian overpass of South Spokane Street located between 16th and 17th Avenues.
- Crosswalk and possibly textured pavement for traffic calming at the South Spokane Street/Beacon Avenue South intersection.
- Improved pedestrian/bicycle pathways throughout the site and along frontage roadways including South Spokane Street, Beacon Avenue South, 15th Avenue South, and 16th Avenue South.
- Improve signage and communication about various parking locations within the Park.
- New parking located near the proposed gymnasiums (28 spaces), the renovated Jefferson Field area (40 spaces), northwest of the Citywide Horticulture facility (30 spaces), and south of the lawn bowling greens (24 spaces). Approximately 15 existing spaces are expected to be removed, resulting in a net increase of 107 spaces with the project.

The project will increase parking demand in the study area. For heavily attended athletic activities at the renovated Jefferson Field, parking may exceed the proposed new supply planned along 16th Avenue South. To mitigate potential parking overflows in this area, the Parks Department should work with the Seattle School District to share parking facilities and ensure that, whenever possible, parking facilities are open and well signed for users. The Parks Department should also explore potential shared parking arrangements with the Veterans Affairs Medical Center for heavy use days and large attendance events. Since the Veterans Affairs Medical Center is relatively far from most of the recreational facilities proposed in the project area, shared parking might be combined with shuttle service along Beacon Avenue South.

Parking demand for other uses at Jefferson Park during the peak recreation season may exceed the available supply located along Beacon Avenue South. Parking could overflow to on-street parking spaces located north of South Spokane Street or ~~east-west~~ of 15th Avenue South. Overflow to these areas would be facilitated by the proposed pedestrian overpass of South Spokane Street. For very

large events, parking overflow could extend south of the project site toward Alaska Street and parking areas generally used by Veterans Affairs Medical Center employees. To maximize on-site parking utilization and minimize impacts to off-site parking facilities, additional signage directing users to various Jefferson Park parking locations should be installed at major access decision points.

For the most efficient use of parking facilities available, the Parks Department should consider scheduling activities at the Community Center Activities Building and Gymnasium, athletic fields, and other facilities such that start times are staggered and large events are not scheduled concurrently. Scheduled activities generating large parking demand should be coordinated with schedules for events at the Mercer Middle School and should consider peak demand at the Veterans Affairs Medical Center.

## **Significant Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts to the transportation system are expected as a result of proposed site plan improvements under either Alternative A or B.

## **PUBLIC SERVICES AND UTILITIES**

This section describes the public services (i.e., police, fire, emergency medical) and utilities (i.e., electricity, water, sewer, storm water, natural gas, and garbage) that are located on or near the project site. Potential impacts to public services and utilities are evaluated and appropriate mitigation measures are described.

### **Affected Environment**

#### **Public Services**

Seattle Fire Station 13 is currently located at the northeast corner of the project area at the intersection of South Spokane Street and Beacon Avenue South. Fire Station 13 is a functional fire station with one engine (Engine 13) and a battalion vehicle. Fire Station 13 also provides emergency medical services to the area. This fire station serves an approximately 1.5 mile radius. However, depending upon the need and the location of the call for service, the fire station may cover calls further to the north or south (Fitzpatrick, personal communication, 2002).

Emergency medical services are also provided by Medic One. The nearest Medic One dispatch locations are at Fire Station 28 on Rainier Avenue South and at Harborview Medical Center.

Seattle Police Department's (SPD) South Precinct serves Jefferson Park and the Beacon Hill area. SPD does not currently patrol Jefferson Park on a routine basis; patrols are performed as time allows. In general, Jefferson is a quiet park and is not considered a place of regular crime activity, although, as at any park, occasional incidents do occur (Mayberry, personal communication, 2002).

## Utilities

Electrical service to Jefferson Park is provided by Seattle City Light. Water, sewer, and storm drainage service is provided by Seattle Public Utilities (SPU). Natural gas service is provided by Puget Sound Energy. Garbage service for Jefferson Community Center is provided by Waste Management, and recyclable materials are picked up once per week by Commercial Recycling Service. Seattle Parks Department personnel pick up garbage from receptacles placed throughout the Park.

The north portion of Jefferson Park contains two uncovered SPU water reservoirs constructed with earthen dam sides and concrete linings. The North Reservoir is currently in use and has a maximum volume of 61 million gallons. The South Reservoir has a maximum volume of 49 million gallons, but was taken out of service in 1979 and currently contains no water (Seattle Public Utilities, 2002). The North Reservoir received a flexible lining in 1980; the liner is now reaching the end of its useful life. The North Reservoir is scheduled to be retired by 2004; this date is dependent upon completion of ~~repair~~-upgrade activities on the South Reservoir. The operations of these facilities serve water to the industrial area south of Yesler, and to the Rainier Valley, Harbor Island, and Alki Point. Inlet and outlet water pipes associated with the reservoirs are present on the project site.

Water utility lines are clustered along the west and south edges of the reservoirs and south of the Community Center (The Portico Group, 2001b). Water lines are also located in the Beacon Avenue South median, and from Beacon Avenue South to the reservoirs (Seattle Department of Parks and Recreation, 2001).

Underground electrical lines for reservoir facility use are also located on the site from South Andover Place and 24th Place South to the pump house near the tenth green, and overhead service between the golf clubhouse and the Citywide Horticulture facility. Puget Sound Energy natural gas lines are located in most major roadways near the project area. Natural gas lines are located in 15th Avenue South, 16th Avenue South, Beacon Avenue South, South Dakota Street, and South Oregon Street. The line in Beacon Avenue South stops approximately at the existing Community Center and enters the Park to approximately half the distance to the reservoirs. The line in South Dakota Street "Ts" at 16th Avenue South and stops (Jainga, personal communication, 2002).

## Impacts

### Alternative A – Interim Plan

#### Construction

Construction activities associated with converting the North Reservoir to the Great Meadow and other park features would require the demolition of the existing facility. This would include the removal of the concrete liner, some pipes, and removal of the security fencing.

Retirement of the North Reservoir is part of SPU's future plans for the Beacon Hill reservoir system. The North Reservoir would remain in service until the South Reservoir ~~repair~~-upgrade is complete. The existing water system would be bypassed temporarily between the ~~repair~~-upgrade of the South

Reservoir and the demolition of the North Reservoir. No short-term impacts to water supply are anticipated as SPU would divert water from other areas to cover the demand from the Beacon Hill reservoir users during the bypass period.

Demolition of the North Reservoir would also require draining the existing water. The majority of the water would be released to the water delivery system for use by customers. The final 5 to 6 feet of water would be released to a dedicated pipe that routes water westward, under I-5, toward the Duwamish where it eventually connects with the sanitary sewer system.

Electrical service to the project area could be disrupted periodically during construction activities as lines are exposed and re-routed or new service connections are established. Disruption to service could also occur to park facilities or nearby residential areas, depending upon the location of electrical lines and the grid structure in the area. Disruptions to service are expected to be temporary and short-term if they occur at all.

Impacts to natural gas lines as a result of construction of this project are not expected to be substantial. During demolition of the existing Community Center any natural gas lines and service connections to the building would need to be shut off prior to and during any demolition activity.

Storm drainage facilities on and near the project area could experience some short-term sedimentation during construction activities. If runoff is not contained and treated properly prior to release to the City's system, sediments from filling and grading activities, stockpiles, or other disturbed soils could enter the system, potentially leading to deposits that could affect stormwater conveyance downstream of the project area.

### Operation

The new facilities would serve a greater number of users, and a minimal increase in calls for police, fire, and medical emergency services would be expected. It is not expected that the proposed park improvements would increase the need for additional police, fire, or emergency medical personnel above existing levels. During large gatherings, such as neighborhood festivals, an increased need for emergency medical and police services could occur to insure the safety and security of visitors.

New on-site stormwater detention facilities would be installed to provide collection and/or treatment of runoff from the proposed park improvements. The proposed constructed pond and stream system is intended to collect and convey surface flow to an underground stormwater line. The proposed Great Meadow would be sloped at 2 to 4 percent to provide adequate surface drainage; this area could be underdrained. The Jefferson Field/Samoan cricket fields would be underdrained to allow for adequate drainage with minimal surface slopes. The new Great Meadow area and new impermeable surfaces (e.g., additional tennis courts, picnic shelter, restroom facilities) would contribute additional storm water to the storm drainage system.

There would be an increased need for electricity, water, sewer, and garbage pick-up under Alternative A to support the new park improvements and expected incremental increase in use. Connections to the local electricity, water, sewer, and/or storm drainage lines would be made for the new gymnasium, new Community Center Activities Building, picnic shelter and restrooms at Jefferson Field. Lighting for the new basketball and tennis courts, lighting for Jefferson Field, and pathway and parking area lighting would require additional electricity. Sports fields can use from

70,500 to 75,600 kilowatt hours (kWh) per year, depending upon the type of field, light fixture configuration, and the number of months and season(s) the fields are in use. In addition to new park facilities, the new traffic signal at South Dakota Street and 15th Avenue South would also be connected to the local electricity provider.

All park improvements, including the new Community Center Gymnasium and new Community Center Activities Building, would increase the need for garbage service due to an expected increase in the number of park visitors. All utilities are currently available on or near the project area.

Following repair and installation of a floating cover over the South Reservoir, this facility will again be a functional part of the Seattle water supply system. Consequently, no long-term impacts to water supply are anticipated.

### **Alternative B – Long-range Plan**

#### **Construction**

Construction-related impacts to public services and utilities as a result of Alternative B would be the same as described above for Alternative A. Impacts to public services and utilities related to construction of a buried South Reservoir would be conducted by SPU under separate environmental review.

#### **Operation**

Operation-related impacts to utilities and public services would be the same as described for the Alternative A. There would be an increased need for electricity, water, sewer, storm drainage, and garbage pick-up under Alternative B to support the second new Community Center Gymnasium, Sports Plateau, Pedestrian Overpass, new concession stand, and restrooms. All utilities are currently available on or near the project site.

Because the soccer and baseball fields on the Sports Plateau would be used for organized games and tournaments, and no such facility currently exists in the Park, there is potential for a slight increase in calls for emergency medical services. It is not expected that the proposed park improvements would increase the need for additional police or fire personnel above existing levels.

### **Alternative C – No Action**

#### **Construction and Operation**

Under the No Action alternative, no construction- or operation-related impacts to public services or utilities are expected as no new major construction or facility expansions would occur.

## **Cumulative Impacts**

Completion of the Rainier Vista redevelopment project (approximately 1,000 to 1,900 units), located to the southwest of the Jefferson Park project area, would result in an additional demand for emergency medical, police, and fire services in the area. However, when combined with the expected minimal increase in demand resulting from improvements proposed in the Jefferson Park



Site Plan alternatives, no substantial cumulative impacts are expected to occur following implementation of either Alternative A or Alternative B.

## **Mitigation Measures**

Mitigation measures to minimize impacts to public services or utilities could include the following:

### **Public Services**

#### *Alternatives A and B*

- Coordinate with Seattle Police Department (SPD) and Seattle Fire Department (SFD) to identify access points at various locations around the Park for emergency vehicles during both construction and operation phases.
- Develop an events plan with police, fire, and emergency medical services to adequately prepare for emergency needs at special and/or large events.
- Work with SPD and SFD to include safety and security measures in the layout and design of landscape features to improve user safety and minimize impacts on police, fire, and medical emergency services.
- Work with neighbors during the design phase of the pedestrian overpass to reduce localized impacts to safety and security resulting from its construction and operation.

### **Utilities**

- Locate and physically mark all utilities at the project site prior to commencement of construction activities to reduce potential for disruption and construction-related accidents.
- To the extent practicable, design and construct new structures such as the new Community Center Activities Building and gymnasiums, using the City of Seattle Sustainable Building Policy (City of Seattle, 2002b) as guidance to reduce impacts on water and energy consumption.
- Encourage recycling opportunities for park users and maintenance operations by incorporating into design features of indoor and outdoor spaces.
- Emphasize maintenance of storm drainage facilities to prevent urban flooding, especially during construction phases.
- On-site detention facilities would be incorporated into new water features in the site plan.
- Park lighting plan would focus on use of energy-efficient fixtures for both interior and exterior park spaces.

## **Significant Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts to public services or utilities are expected as a result of the proposed park improvements under either Alternative A or Alternative B.

## HISTORIC RESOURCES

### Affected Environment

#### History of Jefferson Park

##### Early History

Jefferson Park and SPU's Beacon Hill Reservoirs occupy a portion of a 235-acre site purchased by the City of Seattle from the State of Washington in 1898. The property has had a wide variety of uses over the years, including a "pest house" (smallpox hospital), a stockade for jail inmates, a workingmen's home (a.k.a. Lazy Husband's Home), Japanese-American picnic grounds, and a plant nursery for Parks; a cemetery was also planned. However, the primary early use was for water facilities for the growing city. Pipeline Number One from the City's Cedar River watershed was constructed along Beacon Avenue, opening in 1901. Construction began in 1908 on a second parallel pipeline. Between 1908 and 1910 two reservoirs, holding a total of 110 million gallons, were constructed on 47 acres at the northwest corner of the property. An adjacent gatehouse was constructed at about the same time.

##### The Olmsted Plan for Jefferson Park

In 1903 the Board of Park Commissioners hired the Olmsted Brothers, a prominent Brookline, Massachusetts (Boston area) landscape architecture firm, to develop a plan for parks and boulevards throughout the city. Their report, the *Comprehensive System of Parks and Parkways*, was adopted by the Seattle City Council in October 1903. It included proposals for Jefferson Park (originally called Beacon Hill Park), Beacon Avenue and Cheasty Boulevard.

John Charles Olmsted, on his first visit to Beacon Hill on May 8, 1903, commented on its relatively flat terrain and the potential water views. By that time, the marketable trees had been logged off, and only scattered trees and undergrowth remained. Although no graphics were prepared, the comprehensive plan spoke quite specifically about the proposed park, which was to be the major park south of Madison Street. The proposal provided significant facilities for active recreation, integrating ball fields into the overall design. The circulation system included the widening of Beacon Avenue with a separate drive added for pleasure traffic, and new roadways connecting down the slope to the east and to the southeast. Within the Park, pathways skirted the play field with "loops and branches wandering among groves of trees," sited to allow views over the bay. Vegetation was to include groves of trees, irregular masses of shrubs, groundcover and lawns. Although specific plant materials were not identified, the plan noted that the sandy soil of Jefferson Park was suited to plants different from those in other Seattle parks (Olmsted Brothers, 1905).

Following adoption of the Olmsted Plan, the City agreed that the portion of the Beacon Hill property that was not used for water facilities should be used primarily as a park. The name was also changed about this time, from Beacon Hill Park to Jefferson Park, in honor of Thomas Jefferson. In 1909 the City transferred 137 acres east of Beacon Avenue to the Park Department. In 1911 the Park Fund contributed to the purchase of the southeast portion of the Park; in 1918 the stockade was closed and this property was also turned over to the Park Department (Sherwood, 1977). Subsequently, the City hired the Olmsted firm to prepare a plan for the development of a park on the site.

The “Preliminary Plan for Jefferson Park,” dated February 5, 1912, put in more specific form their thoughts found in the earlier Comprehensive Plan (Figure 3-11). Golf was the focus of the Park, as the city had instructed, but the plan also included a variety of active recreation facilities. Views of water and mountains continued to be a paramount feature. Groves of trees and masses of shrubs, as described earlier, are generally shown on the plan. Beacon Avenue was to have four rows of trees, with a double row down the center median. Jefferson (later Cheasty) Boulevard, extending to the northeast along the southeast edge of the golf course, was also lined by regularly-planted trees. Infrastructure included three shelter houses (with restrooms), storage and maintenance facilities, and a house for the park foreman. The plan also incorporated most of the existing non-park facilities, such as the workingmen’s home and stockade. The reservoirs, which were already in operation, were shown on the plan but were not integrated into the park design (Figure 3-11).

The plan reflected the Olmsted philosophy, a multi-use park with the uses separated to avoid conflicts (HRA, 2001). Key features of the Olmsted plan for Jefferson Park (Figure 3-11) were:

- a nine hole golf course, with a shelter house, a pergola and a pond, east of Beacon Avenue;
- a children’s playground, wading pool and tennis courts between the reservoirs and Beacon Avenue;
- an active recreation area in the center of the western portion of the Park, with a running track, a baseball field with grandstand and basketball courts;
- a pergola and a shelter with a view of Elliott Bay, between the children’s area and the playfield;
- a park storage yard with a tool house and stable at the western edge of the Park, near 15th Avenue South;
- a streetcar shelter on Beacon Avenue;
- two automobile concourses (parking lots), one on each side of Beacon Avenue;
- winding pedestrian paths and a formal garden space near the hospital; and,
- auto roads winding throughout, with a bridge across Beacon Avenue and roadways connecting to the west at Nevada Street and to the east with Jefferson (later Cheasty) Boulevard and 25th Avenue South.

Grading for the Park began soon after the plan was submitted, but funding evidently ran out before the development was completed. Few of the proposed elements, including the pathways and roadways, were constructed. Over the following decades, many elements were added, removed or significantly altered.

### *Early Park Development*

Initial development of the park focused on golf facilities. The principle feature of the Olmsted plan, the golf course, was built almost immediately (1915) as a 9-hole course designed by Thomas M. Bendelow. However, it was expanded to eighteen holes from the nine-hole course originally recommended. This change was brought about by tremendous citizen interest in the new feature and the concentrated efforts of local leaders, notably Sherwood Gillespy and E. C. Cheasty. Although there were two private courses in the county at that time, this was Seattle’s first municipal course, owned by the City and open to the general public. It opened for play in 1915.

A notable departure from the 1912 plan was construction of a golf clubhouse on the west side of Beacon Avenue, instead of constructing a small shelter house on the east side of Beacon Avenue. The 1915 structure burned and was replaced in 1920 with a larger one with a lunchroom, locker rooms and office space. Another departure was the construction in 1923 of a second golf course, a nine-hole course on the west side of Beacon Avenue, south of the club house.

Other active recreation facilities were built during this period for the use of the broader community, although the Olmsted plan for placement was not followed. These included playfields, a children's playground, a shelter house and picnic grounds. All were highly valued, as there were no other parks in the area. The Park became the location of the annual picnic held by Seattle's Japanese community. Despite some local opposition, the event continued until World War II.

The bus shelter near Fire Station 13 was well located to serve the rapidly developing neighborhood to the north of the park, which filled with small single-family homes in the first quarter of the twentieth century. The shelter was across from the neighborhood's major feature, the Jefferson Park Apartments, built in 1927. This historic building is still a major feature of the neighborhood.

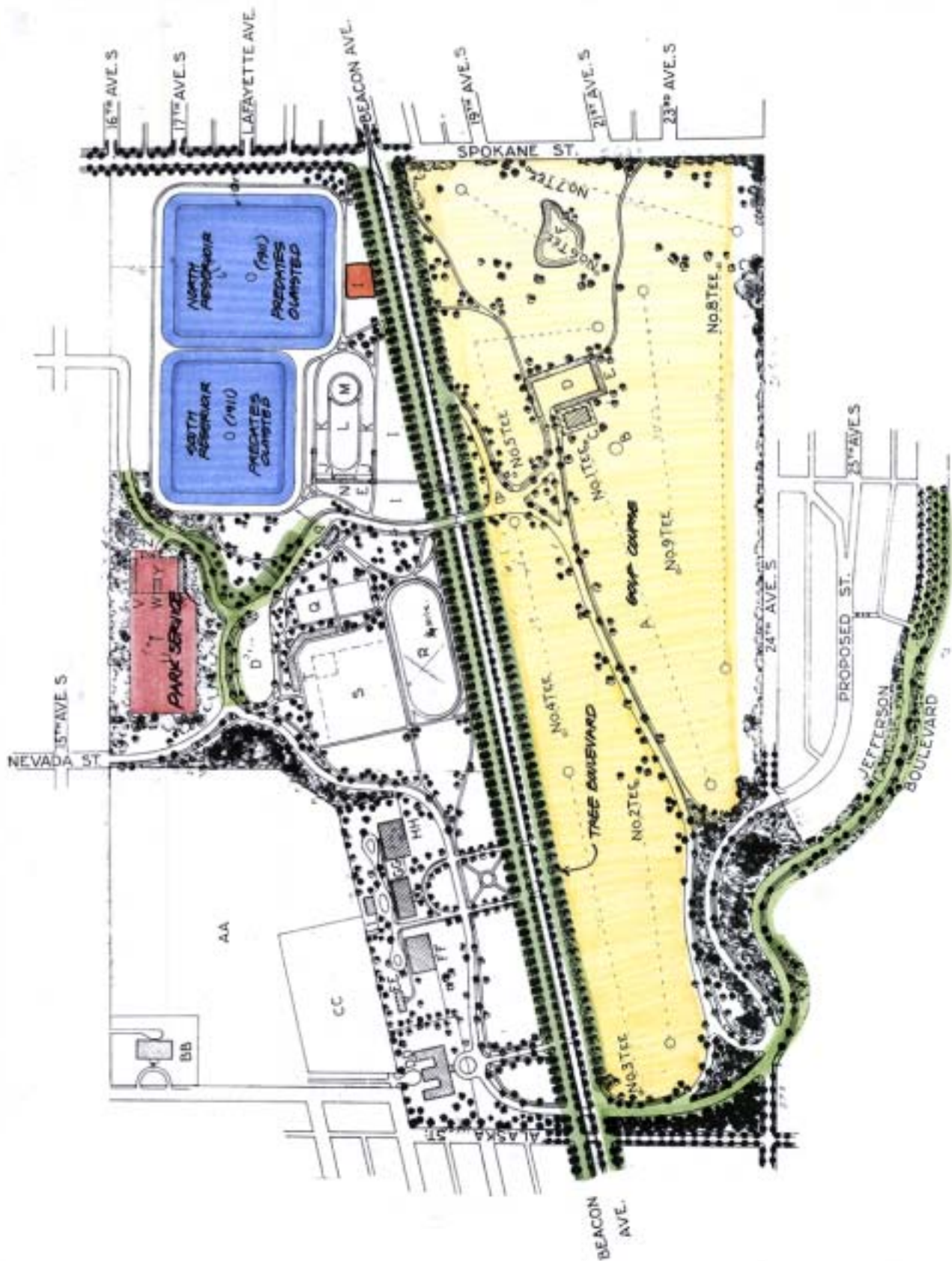
A non-recreational addition to the Park was Fire Station 13, built at the southwest corner of Beacon Avenue South and South Spokane Street in 1927. A trolley shelter was also built nearby, probably a few years before trolley service ended in 1941. Although the 1912 plan had included a trolley shelter near the golf course, this one was located some distance away at a major intersection. A shelter still exists at this site, although it is unclear to what extent it may have been altered.

### *World War II Era*

World War II brought dramatic changes to Seattle, particularly to Beacon Hill. In 1941 the city leased a portion of the area west of Beacon Avenue to the military for use as a recreation camp for soldiers on leave. Originally five acres were planned for the camp, but it grew to more than fifty acres. The camp accommodated more than 1,000 people with temporary living quarters and recreational facilities of every description including playfields, tennis courts, a penny arcade and craft areas. In addition to numerous barracks and administrative structures, a gym, a canteen, a theater and a roller rink were constructed—more than forty buildings in all. Some of the facilities, such as the tennis courts and the lawn bowling green, were built with community participation, and were used by local residents. Installation of anti-aircraft guns led to the closure of the 9-hole golf course. However, the 18-hole course continued to operate.

### *Post-World War II*

The recreation camp formally closed on March 31, 1946, and the Parks Department began to reclaim its facilities for the use of the Beacon Hill community. Although it had been hoped that the military buildings could be used for recreation centers and other civilian uses, they proved to not be up to building code standards and were unsuitable for use by the general public. Because of the cost of upgrading the buildings, only one was retained—the roller rink, which became a storage building. The others were sold at auction and relocated for other uses.



↑ NORTH  
No Scale

File name: 22010historical.ai  
Original graphic by: ACT  
Edits by:  
Date: 5/6/02

Source: The Portico Group.

**FIGURE 3-11.**  
1912 OLMSTED PRELIMINARY PLAN FOR JEFFERSON PARK  
JEFFERSON PARK SITE PLAN EIS  
SEATTLE, WASHINGTON

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The lawn bowling green, built in 1944, was relocated in 1955 to the area west of the golf club house. The original caddy house, used until 1944 as the residence of James Jefferson, the course professional, became the lawn bowling clubhouse in 1948. It was replaced with a new structure in 1970. Once the bowling green had been moved, the nine-hole golf course was reconstructed in its present location south of the golf club house. In 1949 the Parks Department expanded the 1929 shelter house (the present-day Jefferson Community Center) with a large social room. A driving range was added nearby in 1951.

Other community needs also influenced the reconstruction of the Park. In 1949 the city conveyed 44 acres at the Park's southern edge for the construction of a Veterans Affairs Medical Center. The main hospital was completed in 1949 and rebuilt in 1980; numerous smaller structures have been added over the years.

After the tremendous growth in the area during World War II, there was an acute need for a new school to serve the Beacon Hill neighborhood. In 1954-55, after much debate, fourteen acres west of the hospital (the southwest corner of the Park) were conveyed to the Seattle School District for construction of Asa Mercer Middle School.

In terms of park facilities, the most significant activity during this time was the expansion and remodeling of Jefferson Community Center (shelter house) in 1972, following the Forward Thrust bond issue in 1968. The building was given a modern look along with a full kitchen, a large social hall and space for games, art, music and pottery (Sherwood, 1977).

Another major park addition was the construction in 1990 of a City-wide Horticulture Facility at the west edge of the Park. The Water Department also made changes to its facilities. In 1957 a water quality lab was built northwest of the reservoirs; it was expanded in 1974. In 1988 a lab/pump building was added nearby.

### *Existing historic resources*

- The golf clubhouse, outside the project area boundaries, may be eligible for city designation as a historic landmark. The structure was first built in 1935-36, using Works Progress Administration funds. The current structure is the third one for this purpose. The first one burned down in 1919; the replacement structure proved to be too small and was replaced by this larger one in 1936. Although it has been altered, primarily by the enclosure of its front porch, it retains considerable architectural integrity and is significant for its connection with the development of municipal golf in Seattle and with the Works Progress Administration. The statue recognizing Sherwood Gillespy, erected in front of the clubhouse in 1915, is an important part of its character and history.
- The Park's landscape has changed considerably over time, and does not conform to a specific plan. However, the roadway between the lawn bowling green and the golf maintenance building appears similar to that laid out in the Olmsted plan of 1912. Some grading and road building may have occurred in this area before the plan was completed, to serve the earlier facilities. However, the 1936 aerial photograph shows a strong correspondence between this road and that in the Olmsted plan, and this resemblance still exists. This is potentially the only remaining remnant of the Olmsted design.



- Fire Station 13 may also be eligible for City of Seattle landmark designation. Although it received a compatible addition in 1985, it remains a good example of the fire stations that were built in the 1920s, fitting into local neighborhoods in style and scale.
- The reservoir gatehouse is the oldest building in the Park, dating to approximately 1911. The small brick building retains most of its Neo-Classical detailing, although the windows have been filled in with concrete block and a new steel door has been installed.
- The reservoirs themselves, built in 1910-11, are not as distinctive. They are among nine open reservoirs in the city; the oldest of these, at Volunteer Park, was built in 1901.

## **Impacts**

### **Alternative A – Interim Plan**

#### Construction

Most of the proposed actions would occur north of the golf clubhouse. Construction activities may occasionally affect golfing activities and use of the golf clubhouse. Parking north of the clubhouse may be affected temporarily inconveniencing users of the clubhouse. However, the heaviest periods of golfcourse and clubhouse use are on weekends, when construction is not likely to occur. The gatehouse and Fire Station 13 would remain untouched.

#### Operation

A new landscaped walkway, the Jefferson Promenade, is planned to traverse the project area. The promenade approximates the location identified in the Olmsted design and serves to enhance Park's objectives for Jefferson Park. No operation-related impacts to historic resources would occur as a result of park improvements associated with Alternative A.

### **Alternative B – Long-range Plan**

#### Construction

The impacts to historic resources as a result of park improvements associated with Alternative B would be the same as described for Alternative A.

#### Operation

No operation-related impacts to historic resources would occur as a result of park improvements associated with Alternative B.

### **Alternative C – No action**

The No Action alternative would have no major construction- or operation-related impacts to the Park's historic resources.

## **Cumulative Impacts**

No additional new projects are expected to be constructed in the project vicinity, therefore no cumulative impacts to historic resources are anticipated as a result of Alternative A or Alternative B.

## **Mitigation Measures**

Since no impacts to existing historic resource have been identified, no mitigation measures are required. However, the following measures are suggested to protect and enhance the existing potentially historic features of Jefferson Park and the intent of the Olmsted design:

- Locate the section of Jefferson Promenade that is near the lawn bowling clubhouse as close as possible to the location in the original Olmsted design. Consider using the Promenade as a place to commemorate historic figures such as the Olmsted Brothers, area names such as Beacon and Jefferson, and the Japanese-American picnic ground and World War II uses.
- Locate construction activities, as far as possible from the golf clubhouse and other potentially historic features, especially during the periods of heavy use.

## **Significant Unavoidable Adverse Impacts**

No significant unavoidable adverse impacts to historic resources are anticipated as a result of any of the alternatives.